

# textile

# bulletin

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## LOOM NECESSITIES

*Made from the Finest Hickory*



THE BULLARD CLARK COMPANY



**SOUTHERN  
DIVISION**  
Charlotte, N. C.

**NORTHERN  
DIVISION**  
Danielson, Conn.



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of October 3, 1917.





## When you vote on New Mill Machinery

..do you vote a straight **AMERICAN** ticket?

There's no real substitute for American-made production machinery in any branch of American industry. Designed and built to take the strains and stresses of the world's toughest demands for speed and endurance . . . with a minimum of down-time and maintenance . . . American machines are today more than ever the best buy in every field from textiles to metal-working.

Yes, American production machines are the backbone of America's competitive economy . . . *and why settle for anything else?*



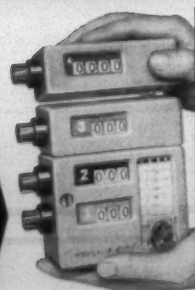
### **VEEDER-ROOT INC.**

**"The Name that Counts"**

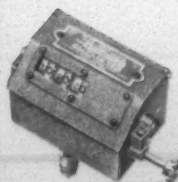
Hartford, Conn. • Greenville, S. C. • Chicago  
New York • Los Angeles • San Francisco • Montreal  
Offices and Agents in Principal Cities

... and here's why it pays to make sure that All New Machines you buy are equipped with **NEW VEEDER-ROOT COUNTERS** . . .

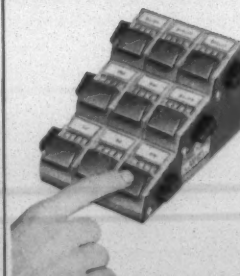
Modern Veeder-Root Counters . . . for looms, frames, knitting machines and all types of textile mill equipment . . . are built with unmatched Veeder-Root know-how and quality to give accurate facts-and-figures through years of trouble-free service. Count on Veeder-Root for closest Control of production and uniformity. Write Veeder-Root for all your counter needs.



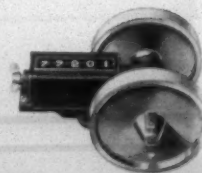
2-3-4 Convertible Counters for looms, frames, knitting machines, etc.



Loom Cut Meters for controlling uniform cuts of cloth.



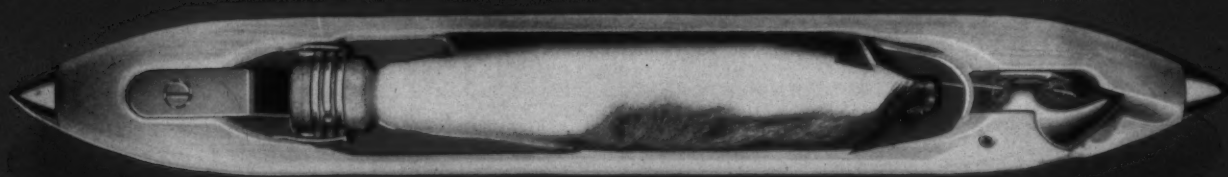
Vary-Tally Multiple Unit Reset Counters for inventory, inspection, and 1,001 other hand-counting jobs.



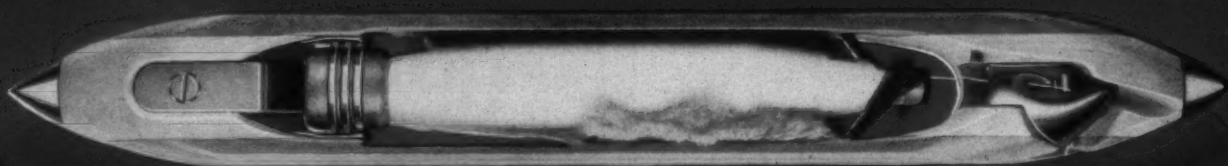
Double-Wheel Linear Counter for indicating lengths in feet, yards, etc.



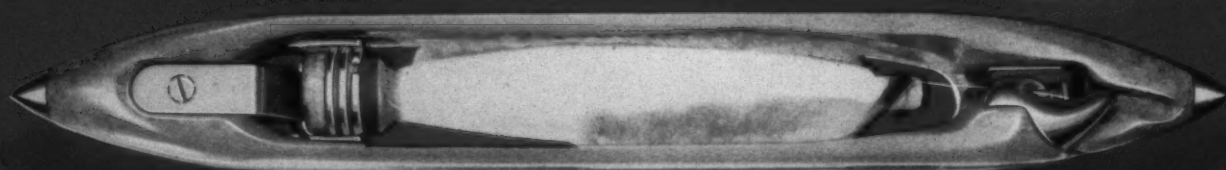
"TRU-FLIGHT"



"TRU-FORM"



"TRU-MOLD"



## REDUCE WEAVING COSTS WITH DRAPER SHUTTLES

*Longer shuttle life and reduced maintenance* are two distinct ways in which Draper shuttles aid in lowering weave room costs. The desire to furnish a shuttle that will meet exactly the conditions under which the mill plans to use it has resulted in the manufacture of a wide variety of Draper shuttles.

"TRU-FLIGHT", "TRU-FORM", and "TRU-MOLD"

shuttles incorporate the finest in materials and design. From all-dogwood to the completely new molded construction, each is engineered to offer *greater shuttle economy and improved loom operation.*

Lower your weaving costs . . . standardize on Draper shuttles, today.



**DRAPER CORPORATION**

HOPEDALE, MASS.

ATLANTA, GA.

GREENSBORO, N. C.

SPARTANBURG, S. C.



# FACTS NOT RUMORS

about  
**SACO-LOWELL  
GWALTNEY  
SPINNING**  
THE ONLY REVOLUTIONARY  
SPINNING IMPROVEMENT  
IN OVER 100 YEARS

"Performing beyond our  
expectations . . . not a  
single complaint from our  
knitting room" says the  
Russell Manufacturing Co.

NO. 4 OF A SERIES

THOMAS O. RUSSELL, PRESIDENT  
R. A. RUSSELL, VICE PRESIDENT



**The Russell Manufacturing Co.**

NEW YORK-4 WEST 40TH STREET  
CHICAGO-222 WEST ADAMS STREET  
SAN FRANCISCO-720 MARKET STREET  
BIRMINGHAM-437 1/2 1ST NAT. BANK BLDG  
DALLAS-817 COMMERCE STREET

ALEXANDER CITY, ALABAMA

May 18, 1956

E. B. ALISON, VICE PRESIDENT  
O. C. THOMAS, SEC. & TREAS.

RUSSELL MILL  
RUSSCO MILL  
RUSSCONY MILL  
ELIZABETH MILL  
BETHEL FRANCHIS MILL  
ROBERTA MILL

Mr. W. F. Lowell, Vice President  
Saco-Lowell Shops  
60 Battery March  
Boston 10, Mass.

Dear Mr. Lowell:

I am both happy and proud to inform you that our new SG-1 spinning installation is performing beyond our expectations.

We feel that this spinning installation is the most modern in the country inasmuch as we have water cooled motors and all the latest accessories. The yarn, by the way, from these frames is going into our knitting operations and we are proud to say we have not had a single complaint from our knitting room. The yarn is much more even and has a much higher break factor than our other spinning which includes some comparatively new 1951 model frames.

In addition to improving our yarn and cutting spinning cost we have been able to reduce our winding cost by exactly one-half.

Yours very truly,

THE RUSSELL MANUFACTURING CO.

E. F. Gwaltney, General Superintendent

ECO:1b

## MORE FACTS . . .

Operating information on  
Russell Knitting Yarn Frames

Count	T. M.	Ring Size	F. Roll Speed	Eff. %	Net Pounds Per **Frame Per 24 hours
7.25's	2.85	3"	200	94	930
10's	2.94	3"	201	95	686
11's	2.94	3"	197	95	611
13's	2.94	3"	199	95	523
17's	3.00	3"	186	96	378
18's	3.00	3"	185	96	355
24's	3.12	3"	155	97	224
26's	3.25	3"	147	98 1/2	200
28's	3.25	3"	143	99	182

\* Efficiency includes traveler change and frame change down times.

\*\* Taken from actual Hank Clock daily readings on 240 spindle frames.

More than 70 mills, operating over 450,000 spindles of Saco-Lowell Gwaltney Spinning, are producing stronger, more even yarns of highest possible quality at important reductions in cost. A Saco-Lowell Engineer will be glad to prepare "A Forecast of Savings" for your mill.



**SACO-LOWELL**

60 BATTERY MARCH STREET, BOSTON 10, MASS.

Shops at BIDDFORD and SACO, MAINE and SANFORD, N. C.  
SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA



# New Pickers?

✓All spur gears are cut instead of having rough cast teeth.

✓Many gears are cut steel where other pickers have rough cast, or malleable iron gears.

✓Ball bearings are used wherever practicable, and in places not used on any other pickers. Oilite bearings are used at most points where ball bearings can not be employed. The extensive use of ball bearings and Oilite bearings eliminates practically all routine lubrication.

✓Self-aligning, permanently lubricated ball bearings are used on screen shafts. They never require attention, and never create the oily chokes occurring with plain oil bearings.

✓Self-aligning Oilite draw roll bearings can be installed in a few minutes, and lubricated every few months.

✓A more sensitive evener, with:

A new weighting method which keeps moving parts under tension and eliminates lost motion

Ball bearing rollers to guide the scale motion in the evener case to keep the scale in perfect alignment and prevent binding against the case

A round sliding stem in an Oilite bushing in the evener case instead of the old rectangular stem without lubrication

An improved evener case, more nearly dust tight than older models

✓A really silent sideshaft drive to the evener. This drive is mounted wholly on ball bearings and provides for any necessary speed changes to take care of different lap weights.

✓The Aldrich Synchronizer, which makes it possible to produce a lap from a lap, instead of merely breaker laps for the cards, as is done on most other single process picking systems.

✓A completely redesigned calender containing so many new features that these will be described in a future advertisement.

**Aldrich Machine  
Works**  
Greenwood, South Carolina





# TAKES INSTANTLY

to cold water

Supergum H takes to cold water like a polar bear. Quickly soluble in cold water, it is used to create a thickening paste for full flow in both roller and screen printing application.

Very low in solids and high in viscosity, the paste is easy to handle and provides high color value. And it's compatible with most colors, as well as starches and other gums. Supergum H is equally effective in alkaline and acid medium.

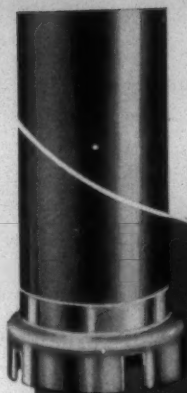
For information and samples, contact Jacques Wolf and Co. today.



**JACQUES WOLF & CO.**  
*Chemicals* PASSAIC, N. J.

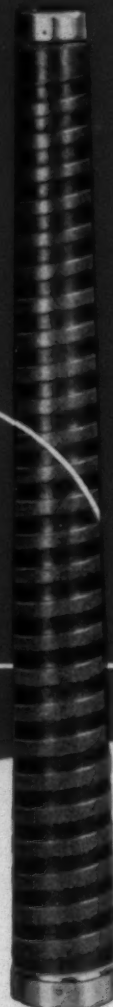
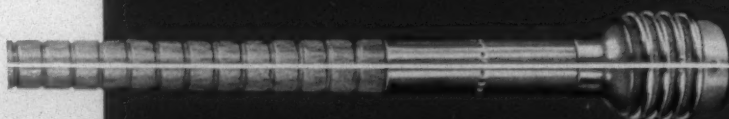
Plants in: Clifton, N.J.,  
Carlstadt, N.J.,  
Los Angeles, Calif.





**FILLING**

**WARP**



**EMIL ADOLFF**

**REUTLINGEN / WTTBG. GERMANY**

Sales organization for the United States and Canada:

**TEXTUBE CORPORATION, 695 SUMMER ST., STAMFORD, CONN., FIRESIDE 8-9253**

**Southern Representatives:**

Watson & Desmond, P. O. B. 1954  
Charlotte, N. C., Edison 3-6154

**Canadian Representatives:**

Crowther Limited, 212-214 Victoria Ave.  
Westmount, Montreal, P. Q., Walnut 0148



# How to turn your sizing problems into sizable profits

Are you up against undue breakage of yarn on slasher or looms? Or having tough going in sizing and de-sizing spun rayon, blends or synthetics? Are your re-starching, printing and back-filling operations as economical and effective as they should be?

If you are faced with these or other sizing problems our Technical Staff can give you a powerful assist toward a profitable solution. For example:

In our modern textile laboratory at Greenville, S. C., Corn Products technicians are constantly engaged in seeking solutions to this type of problem. Important projects now under way on behalf of textile mills include check tests on size content of yarns, performance tests of various formulas, perfection of size formulas to meet the specific needs of certain mills.

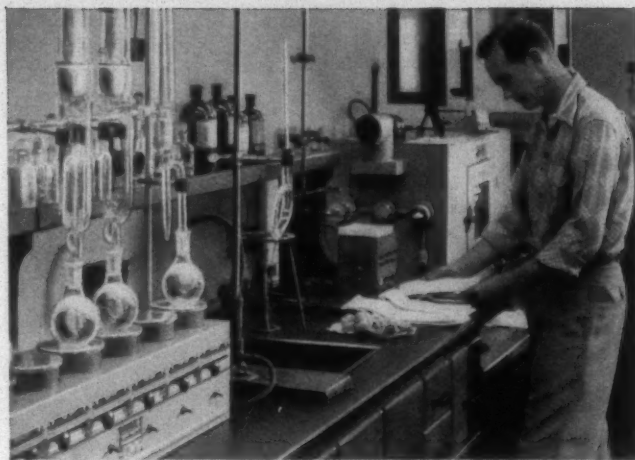
## New horizons for textile research

In addition, the Corn Products Multiple Fellowship program sponsors a unique Pilot Plant Slasher Assembly installed at the Mellon Institute, Pittsburgh. Designed and constructed to facilitate study of sizing of all types of natural and synthetic yarns, this flexible assembly permits types of research never before possible—leading to new and better products for the entire textile industry.

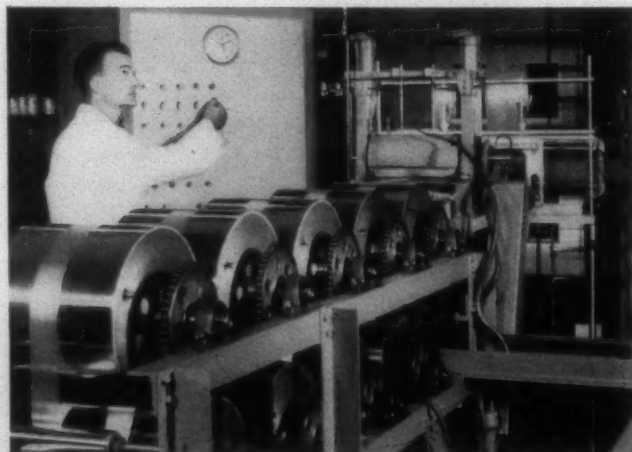
Through constant research, continuing quality control and the development of new products and techniques, Corn Products is helping the industry produce higher quality fabrics, in greater volume, at lower unit cost.

## Ask the man from Corn Products:

With complete laboratory and technical facilities at his disposal, he can point the way to a solution of your problem. Write or phone for information, no obligation.



Check-testing yarns at Corn Products field laboratory, Greenville, S. C. These and many other projects are undertaken on behalf of textile mills.



Partial view of pilot plant slasher assembly at Mellon Institute. Components include creel with raw yarn, pre-tensioning mechanism and electrical stop motions; control panel; condensing and leasing apparatus; main slasher unit and size box quetsch assembly.



**Corn Products make these famous starches for the textile industry—  
Eagle® • Foxhead® • Globe® • Hercules • Ten-O-Film® • Globe® Dextrines & Gums**





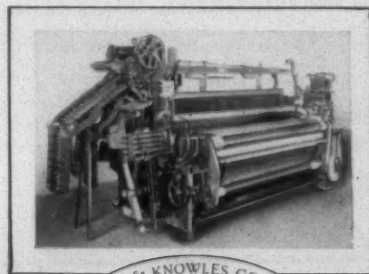
## When the Duke *Steps Out* of traditional trousers

... can you follow the new fashion-leader?

When a young nobleman recently appeared at a formal wedding *without* striped trousers . . . but *with* plaid trousers . . . the world of fashion blinked, looked again — and followed suit!

That's how suddenly a new fad can start. And also, just how suddenly a single-purpose weaveroom can be left at the post, unable to follow the new path to plush profits.

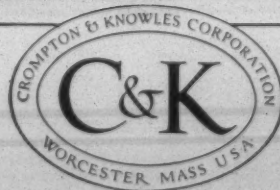
But a C&K Multi-Purpose or Select-A-Pic weaveroom can actually convert *overnight* to any pattern or construction . . . even from plain to fancy fabrics and back again . . . and to any combination of colors. So you're all ready at all times to follow the winds of fashion, however they may blow. And in addition, M-P or Select-A-Pic Looms will give you higher production of better fabric . . . as well as increased work-assignments and lower maintenance.



**CROMPTON & KNOWLES**  
*Corporation*

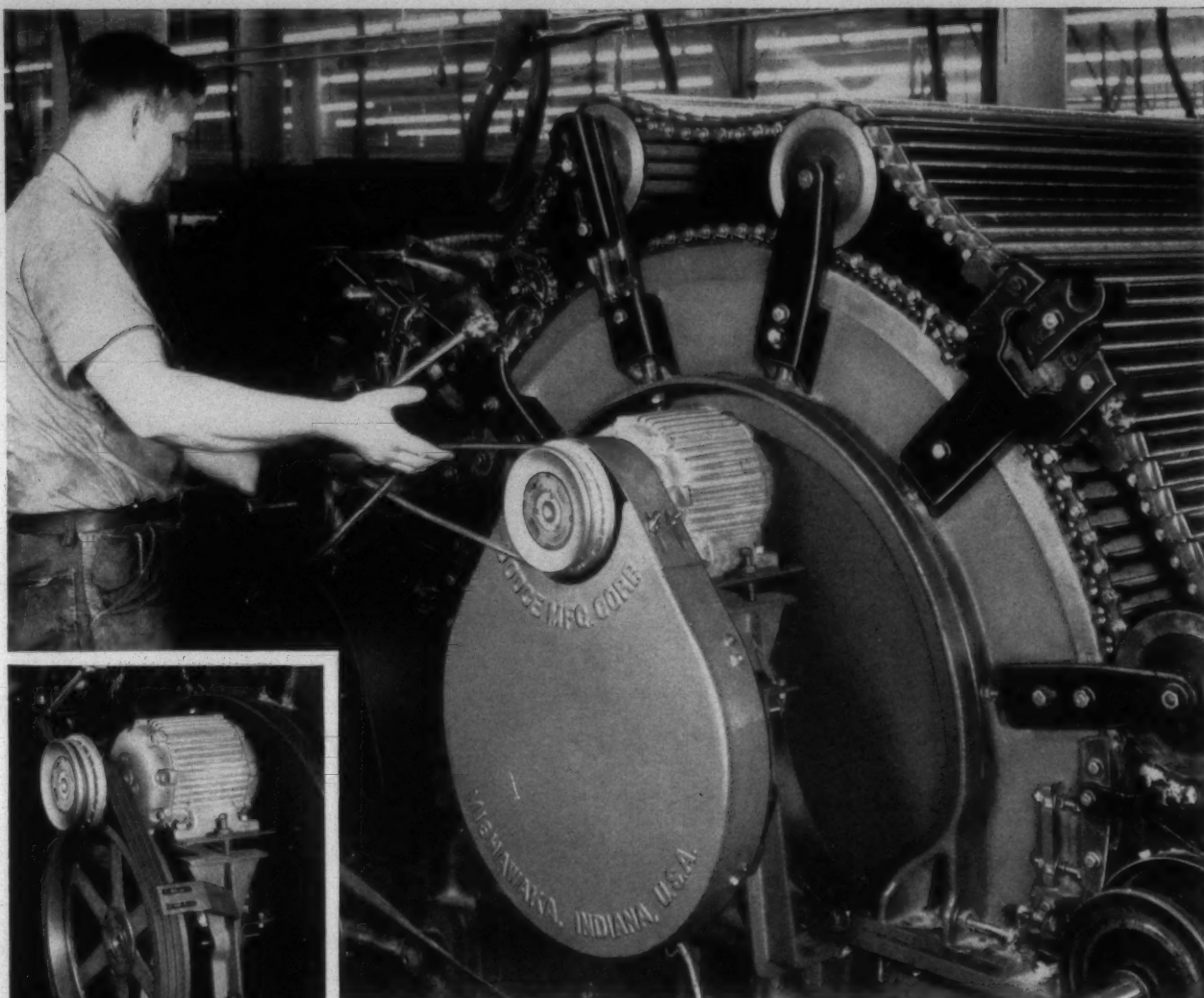
WORCESTER 1, MASSACHUSETTS, U. S. A.

CHARLOTTE, N. C. • PHILADELPHIA, PA. • ALLENTOWN, PA.



Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I. • Crompton & Knowles of Canada Ltd., Montreal, Quebec





## New Drive REVOLUTIONIZES

**CARD PERFORMANCE... STARTS SOFTLY**

**...ACCELERATES QUICKLY TO FULL SPEED**

**...AVOIDS EXCESSIVE STRAIN**

### **Components of Dodge FLEXIDYNE Card Drive**

- Flexidyne, keyed to motor shaft
- Pedestal, supporting motor
- V-flat drive
- Aluminum stripper pulley
- Aluminum guard

**A complete package,  
ready to install.**

Flexidyne, heart of this new complete Card Drive by Dodge, picks up the load smoothly... protects machinery and motor against shock and overload... delivers 100% efficiency during running cycle. Flexidyne, the Dry Fluid Drive, eliminates need for high torque motors and expensive controls, saves power, provides a new and better way to drive textile machines.

Note the special aluminum pulley mounted

on Flexidyne housing, enabling quick, convenient operation of stripper. Pedestal has adjustable motor base to control tension on V-belts. You should have the full story of all the advantages of the new Dodge Flexidyne Card Drive. Ask your local Dodge Distributor, or write us, for new illustrated Bulletin A-653.

**DODGE MANUFACTURING CORPORATION**  
6700 Union Street, Mishawaka, Indiana



**CALL THE TRANSMISSIONEER,** your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new, cost-saving methods. Look for his name under "Power Transmission Machinery" in your classified telephone directory, or write us.

# DODGE

→ of Mishawaka, Ind.





## for ORLON... GENACRYL dyes

*Pioneer basic dyes of a new type for acrylic fibers*

GENACRYL® dyestuffs are straight, water-soluble colorants differing from conventional basic dyes. They give bright, strong shades on Orlon acrylic fibers—characterized by light fastness fully adequate for the end-use requirements of Orlon and by very good fastness to drycleaning, perspiration, sublimation, rubbing, and washing with soap and soda at 160° F.

GENACRYL Yellow, Pink, Red, Oranges, and Blues yield level and well-penetrated dyeings, by a simple direct-dyeing procedure at temperatures near the boil. Because of exceptional brightness, a wide range of

combination shades can be made from the GENACRYL dyes, and these can be readily supplemented by simultaneous application of selected ordinary basic dyes—without complication of the dyeing procedure.

The GENACRYL dyes have been perfected to meet your demands for coloring Orlon and other acrylic fibers, and particularly for Orlon-wool blends. Ease of application and great tinctorial value are important production benefits from their use. For further information, please call on our sales office nearest you, or write us direct.

\*Acrylic fiber of E. I. du Pont de Nemours & Co. (Inc.)

*From Research to Reality ...*



**GENERAL DYESTUFF COMPANY**

A SALES DIVISION OF

**GENERAL ANILINE & FILM CORPORATION**

435 HUDSON STREET • NEW YORK 14 • NEW YORK

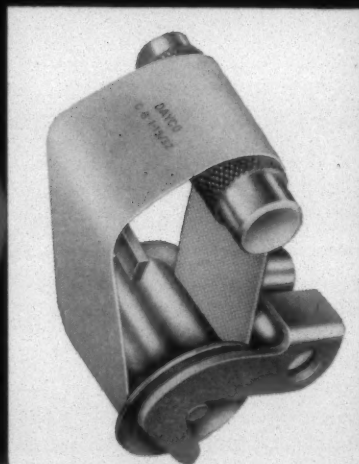
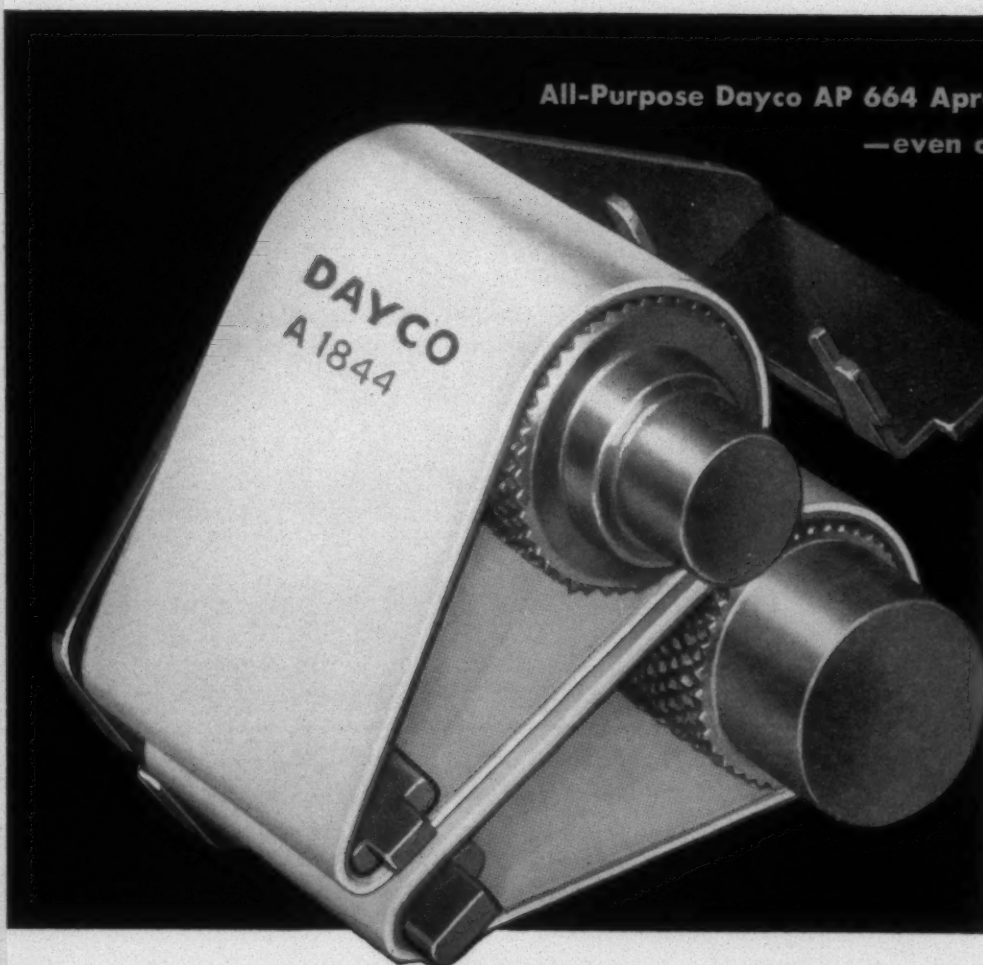
BOSTON • CHARLOTTE • CHATTANOOGA • CHICAGO • LOS ANGELES • NEW YORK • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO • IN CANADA: CHEMICAL DEVELOPMENTS OF CANADA, LTD., MONTREAL



# *New flexible apron... offer 8 important*

**All-Purpose Dayco AP 664 Apron improves yarn control  
—even on new high draft frames**

**Available for single and  
double apron systems**



**These important features mean more uniform  
yarn, trouble-free operation**

- 1. Greater flexibility eliminates drag around nose bar**
- 2. Reduced co-efficient of friction—chatter-proof**
- 3. Lint-free—won't hold or stick to fibers**
- 4. Highly oil resistant**

**Test the easy flexibility** of the new Dayco AP 664 Apron with your own hands! See the clean pink color of

the smooth, semi-gloss inner surface. Reduced co-efficient of friction minimizes chatter around the nose bar on low, high and super draft frames.

**New light blue compounds** in the drafting surface take just the right finish for all fibers—synthetic and natural. Special ingredients will not adhere to fibers after shutdowns, nor hold lint to coat the drafting surface. This superior apron is unaffected by extremes of temperature and humidity. No known oils affect the efficiency of the drawing face the remarkable new Dayco AP 664 Apron.



# *new lap resistant cot... drafting advantages*

All Weather Dayco EW 661 Cot draws uniformly,  
despite extreme "dog day" heat and humidity.



Completely new EVERGREEN compounds  
give you these vital features:

1. Improved drawing of all fibers—especially synthetics
2. Stays dry—won't sweat
3. Never becomes sticky
4. Won't adhere to fibers during shutdowns

**Amazing surface action** of newly developed EVERGREEN compounds assure you practically lap-free spinning every day of the year. This NEW Dayco Cot has proved itself lap resistant in *any* weather in actual mill tests. It never sweats nor becomes sticky, so the yarn can't slip nor adhere to the surface.

**Even on mid-summer "dog days"** with heat and humidity zooming upward, the EVERGREEN compounds in

the new Dayco EW 661 Cot run cool, draw yarn smoothly, evenly, virtually *without lap-ups!*

Your Dayco Representative will be in to see you soon. He'll be glad to arrange for you to run a test frame of the all new Dayco AP 664 Aprons and the new all-weather Dayco EW 661 Cots as well as give you additional facts on these new, improved Dayco products. The Dayton Rubber Company, Textile Div., 401 S. C. National Bank Bldg., Greenville, S. C.

## **Dayton Rubber**

**DAYCO AND THOROBRED TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING**

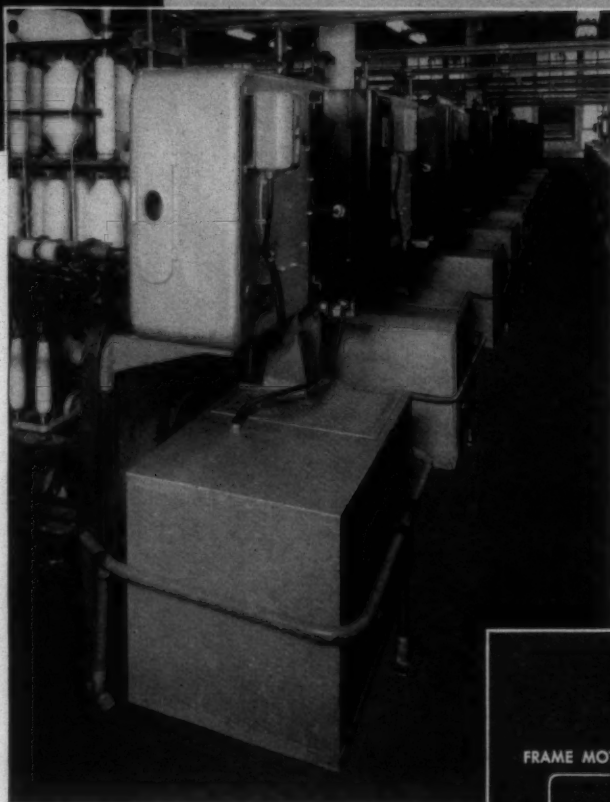




Does three jobs at one time!

# NEW! Bahnson Central Heat Removal System

PAT. PENDING



Already selected (photo above) and preferred by a number of the nation's top textile mills because it does three important jobs simultaneously, the Bahnson Central Heat Removal System helps establish and maintain better room air conditions.

The Bahnson Central Heat Removal System is designed as a flexible unit installation to avoid disrupting production due to single fan failure; the frame motor enclosure is constructed with a "quick latch" connection facilitating access for maintenance. The Bahnson Central Heat Removal System is adaptable to existing Bahnson Collecto-Vac Systems and can be installed separately.

## 1. Takes Out Unwanted Heat From 2 Sources

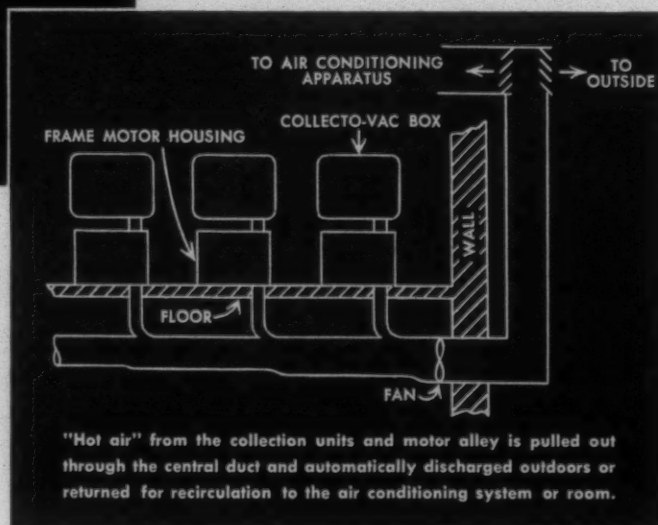
Vacuum collection heat and frame motor heat removed simultaneously.

## 2. Provides More Uniform Air Conditions

Concentrated motor alley heat eliminated with maximum cooling.

## 3. Cools Entire Room When Air Exhausted Outdoors

Room heat load economically lowered by removing heat from collection unit plus frame motor to outside.



### Bahnson P. M.\* Plan

Complete \*Package Modernization Plan with new equipment for end collection, cleaning, creels, air conditioning. Offers one-source responsibility and service plus dollar savings.



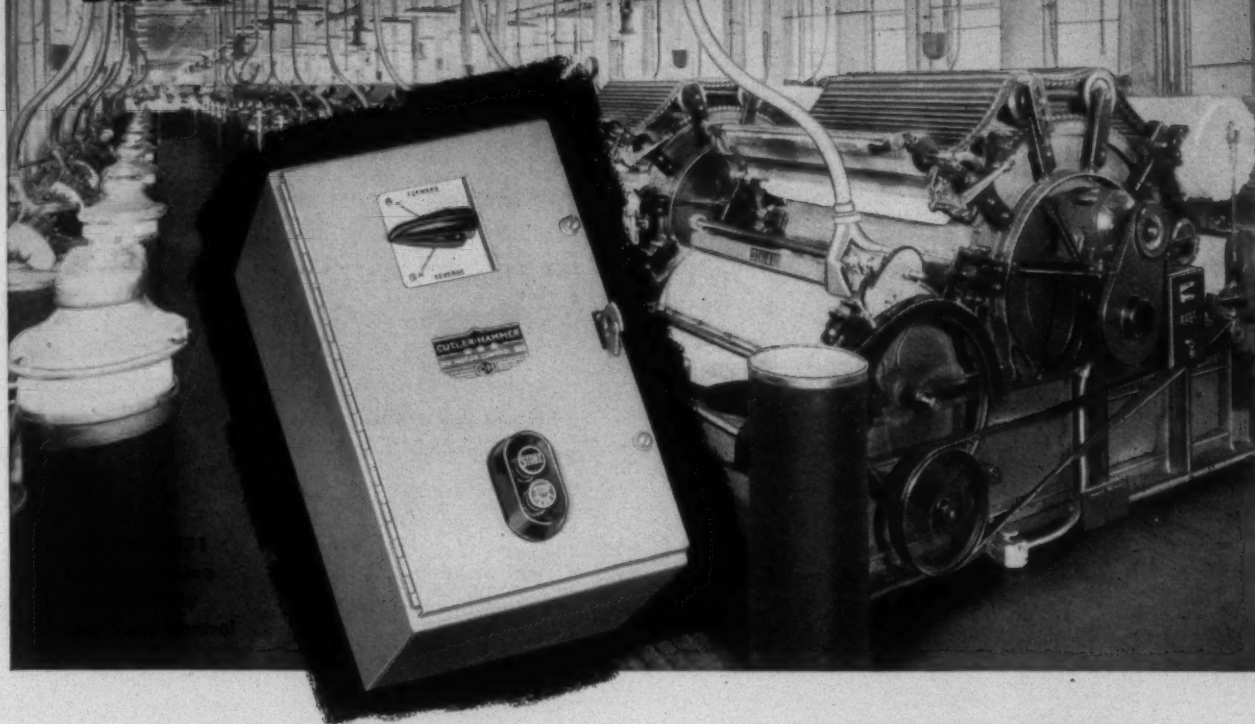
### For more information:

Write for full data or let our representative call for a detailed explanation and recommendation.

AIR CONDITIONING / VACUUM COLLECTION / CLEANING / CREELS



## CUTLER-HAMMER THREE-STAR MOTOR CONTROL BRINGS PEAK PERFORMANCE TO COTTON CARDS

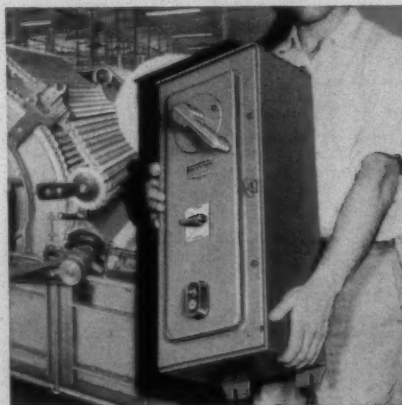


Modern carding is done electrically . . . controlled by Cutler-Hammer Three-Star Motor Control. Throughout the textile industry progressive mills are converting their cards from dangerous, cumbersome line shaft drives to modern, efficient individual electrical drives. Gone is the clutter of line shafts, pulleys and belts. No more oil drippings. Maintenance costs have been slashed. Thanks to individual electrical drives, these modern card rooms are cleaner, safer and many times more productive. Consistently mill after mill specified C-H control while modernizing . . . knowing Cutler-Hammer Three-Star Card Control would assure them the dependability, safety and peak performance so vital.

Cutler-Hammer Three-Star Card Control is a complete control unit in a single lint-tight enclosure. Convenient pushbutton-control starts and stops the card in either direction. An externally operated reversing switch selects the direction of rotation . . . forward for carding, reverse for grinding; but for safety-sake the card cannot be reversed while running. The famous C-H eutectic alloy overload relay is your assurance of complete, dependable motor overload protection. Special sensing coils allow the motor to start the high inertia load, but will not permit the motor to operate on a damaging running-overload.

These magnetic, across-the-line starters are available in three types; starters only, fusible combination starters, and circuit breaker combination starters. All feature C-H time-tested vertical contacts which *never* require maintenance with all normal use. The fusible combination starter includes a contactor type disconnect switch with an externally operated handle. The circuit breaker combination starter also includes an external operating handle which can manually trip the breaker. Multiple padlocking of the operating handle in the "off" position guarantees safe card maintenance . . . no unauthorized operation.

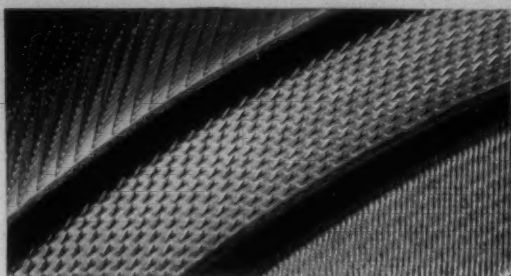
For modern cotton card performance, specify Cutler-Hammer Three-Star Card Control. Your authorized Cutler-Hammer Distributor is stocked and ready to serve you with the finest in textile machinery control . . . Cutler-Hammer Control. CUTLER-HAMMER, Inc., 1455 St. Paul Avenue, Milwaukee 1, Wisconsin.



**INSTALLS EASIER—WORKS BETTER—LASTS LONGER** C-H Three-Star Card Control is perfect for every cotton card. Select either the fusible or circuit breaker type combination card control, or starter only.







# Ashworth Tips ON CARDING

No. 35 in a Series

## SURFACE GRINDING

In spite of all that the manufacturer of the card can do to prevent it, distortion of cylindrical castings — such as those that become cylinders, doffers and lickerins on cotton cards — does occur in some instances, and to a greater or lesser degree, over the years that the card is in operation. The utmost precaution is taken to age these castings properly, and in the machining of them painstaking care is exercised to assure that they will be circumferentially true. There are times, however, when certain castings stubbornly refuse to be "at rest"; and in many instances the mill is unaware that they have "worked" and their perimeter is no longer a true circle.

In Tip No. 31, published in July, 1956, mention was made of mills adopting the grinding of bare doffers as a standard practice prior to the application of new card clothing. It is equally important that cylinders be checked before they are reclothed to determine whether internal stresses have made surface changes, either in contour or concentricity, and surface grinding is required. Serious jams, incidentally, have been known to effect such a change in a cylinder's surface as to make grinding imperative.

Although card clothing installed on a cylinder or doffer that is out-of-round can be ground ultimately to a true circumference, it may be only through excessive grinding that this is accomplished; with the possible result that the wire becomes fatigued and susceptible to early "shedding". If "shedding" or "shelling out" does not ensue, more of the usable length of the teeth is ground off than would be the case if the roll was not in that condition. In extreme cases, the wire

has been pushed under the foundation on the high side of an out-of-round cylinder, presenting an appearance similar to that of a raised fillet.

An effective method whereby an out-of-round or otherwise distorted cylinder or doffer may be readily detected is by means of checking with a dial indicator. The extent to which a correction, if any, should be made is at once apparent and the progress of the surface grinding can be measured from time to time as it advances.

Mills intent upon maintaining their cards in the best possible condition, in getting the utmost in quality from their card clothing and, quite possibly, adding to its life, as well, will find it well worth while to check the surface condition of the cylinder and doffer whenever new clothing is about to be installed and to surface grind these members of the card if this procedure is indicated.

### ASHWORTH BROS., INC.

*American Card Clothing Co. (Woolen Division)*

Fall River\*†‡ Worcester‡ Philadelphia\*†‡ Atlanta†‡ Greenville\*†‡ Charlotte†‡ Dallas†‡ (Textile Supply Co.)

E. G. Paules, Representative — Los Angeles, Calif.

\*Factory †Repair Shop ‡Distributing Point  
3 Factories • 6 Repair Shops • 7 Distributing Points

### PRODUCTS AND SERVICES

Clothing for Cotton, Wool, Worsted, Silk, Synthetic Fibre and Asbestos cards and for All Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire. Lickerins and Topflats Reclothed.

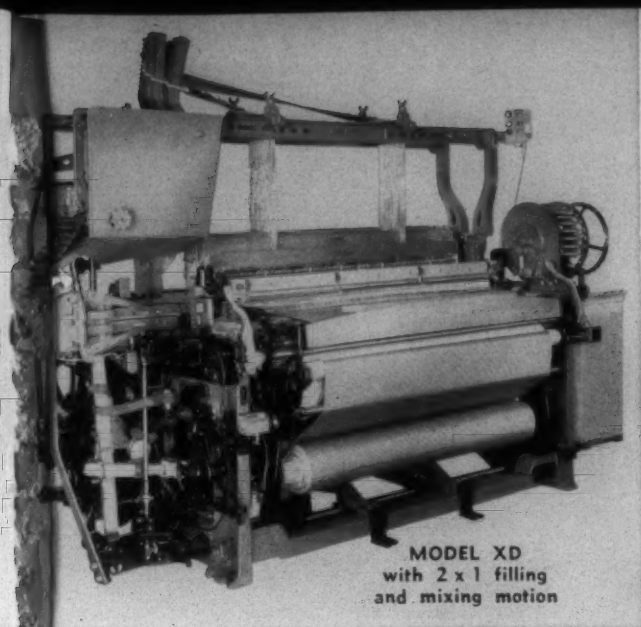
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# Ashworth

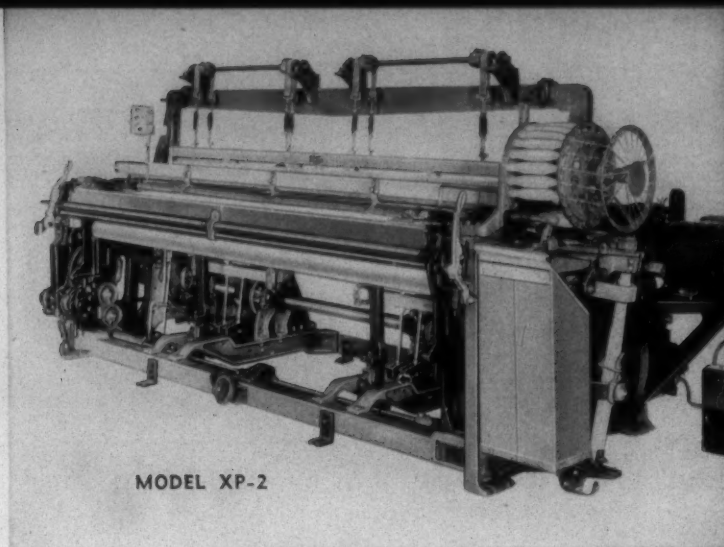
PIONEERS IN  
CARD CLOTHING

3 FACTORIES • • • 6 REPAIR SHOPS • • • 7 DISTRIBUTING POINTS





MODEL XD  
with 2 x 1 filling  
and mixing motion

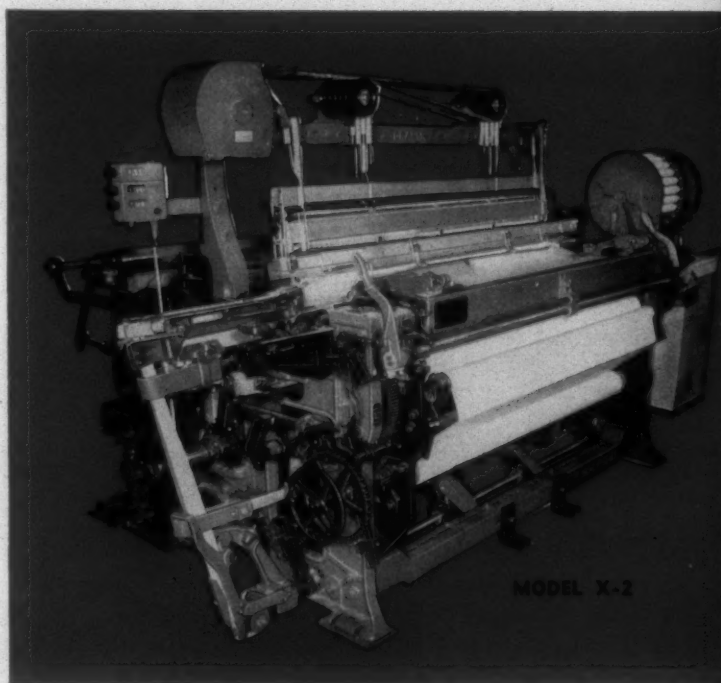


MODEL XP-2

## DRAPER LOOMS ARE THE WORLD'S FINEST SINGLE SHUTTLE LOOMS

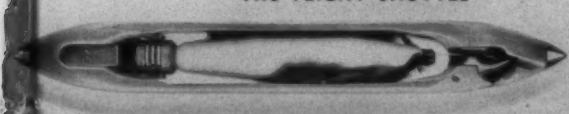
Draper High-Speed Automatic Looms, featuring many new developments, are today's accepted standard for production, economy and versatility in weaving. Available in several models and widths, Draper looms are currently in use in textile mills throughout the world.

*Draper looms, accessories and repair parts reduce weaving costs.*

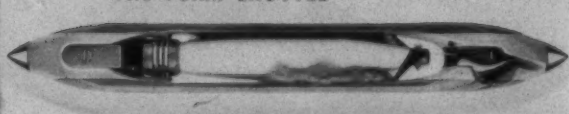


MODEL X-2

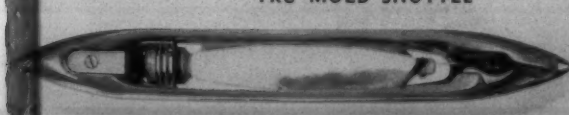
TRU-FLIGHT SHUTTLE



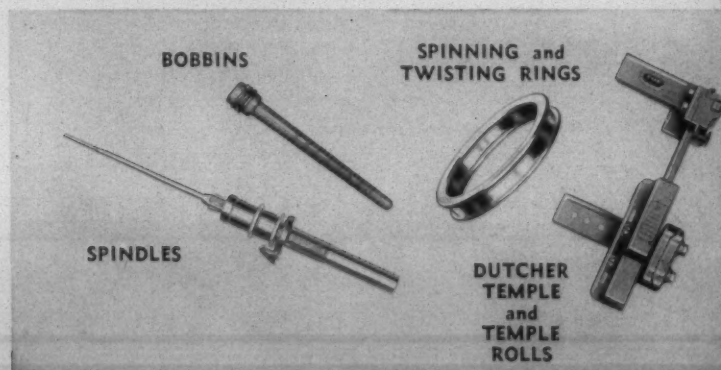
TRU-FORM SHUTTLE



TRU-MOLD SHUTTLE



## DRAPER PARTS AND ACCESSORIES FOR BEST PERFORMANCE



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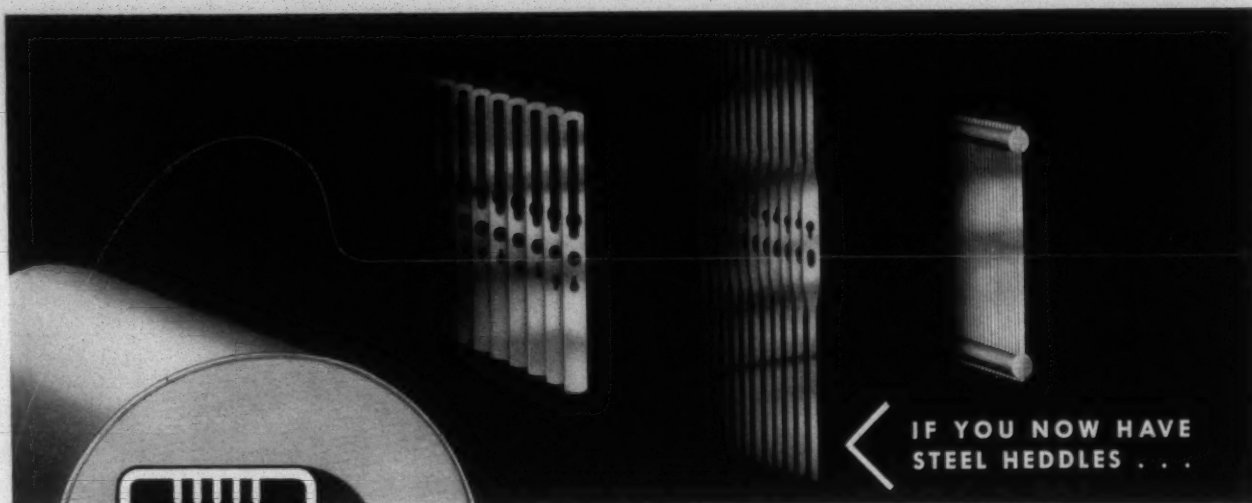
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# Why not take advantage of potential savings?



## WARP DRAWING MACHINE

**DRAWS**

DROP WIRES (KEYHOLE-TYPE)  
 STEEL HEDDLES (KEYHOLE-TYPE)  
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*All in One Operation*

Your mill may be one of the many now equipped with the keyhole type of steel heddle used for automatic warp-drawing. We know that numerous mills have bought these heddles because, as it happens, they also work better in the weaving. So, *if you now have suitable keyhole flat steel heddles*, you are all set to take the next step and put in Barber-Colman Warp Drawing for *additional* savings. The Barber-Colman machine has a power-driven needle which, at each stroke, draws the proper thread through the correct selection of drop wire, heddle, and reed dent. This correct selection is made accurately and

automatically for each pick by a sequence of mechanical motions controlled by a pattern strip punched in accordance with the designer's draft. Very substantial reductions in drawing-in cost are possible, particularly on patterned goods such as stripes, plaids, and fancy weaves. Possibilities are not limited to large production only nor to fancy goods only, as many short-run and plain goods mills are gaining many advantages through faster pattern changes. *Write for a copy of the current USERS LIST, and ask your Barber-Colman representative to arrange for a free estimate showing the opportunities for savings in your mill.*

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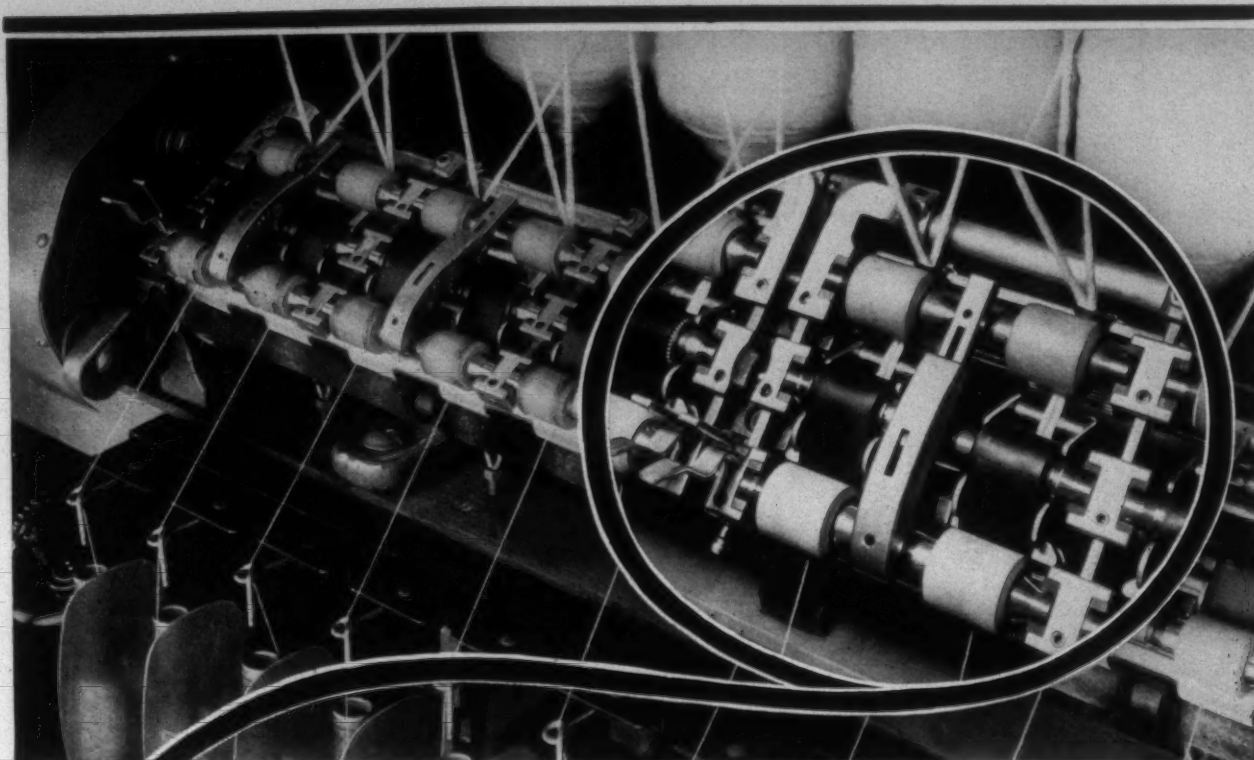
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 11 Piccadilly  
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- No gradual build-up of drag as experienced with anti-friction rolls
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- Reduced cleaning
- Reduced oiling
- Perfect alignment

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## ON PRODUCTION COSTS AND INCREASE QUALITY

WITH THE

## BOULIGNY

2,769,500 spindles are now operating with Whitehead Permalube cap bar nebs and saddles and Boulogny hardened steel rolls.

The Mills in which this equipment is installed report a 30 to 40% return on their investment.

The Boulogny Tru-Draft System is now complete from roller beam up—with Drafts up to 50.

Our trained technical staff can assist you on any spinning problem.

HARDENED STEEL ROLLS • ROLLER STANDS • PERMALUBE NEBS AND SADDLES • CRADLES • COMPOUND GEARING  
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DIVISION OF R. H. BOULIGNY, INC.  
CHARLOTTE, N. C.



# 85 lb. Laps!

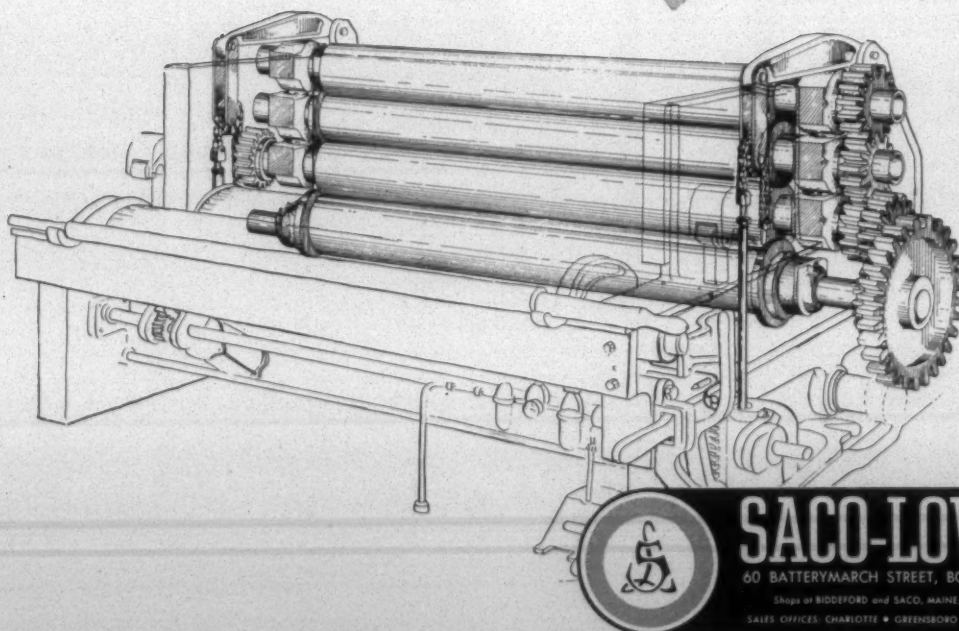
## NEW HIGH COMPRESSION CALENDER ROLL CHANGEOVER FOR SACO-LOWELL PICKERS

### CUTS COSTS 4 WAYS:

1. Produces improved 85 lb. laps.
2. 60% more yardage in the same overall diameter as that previously used.
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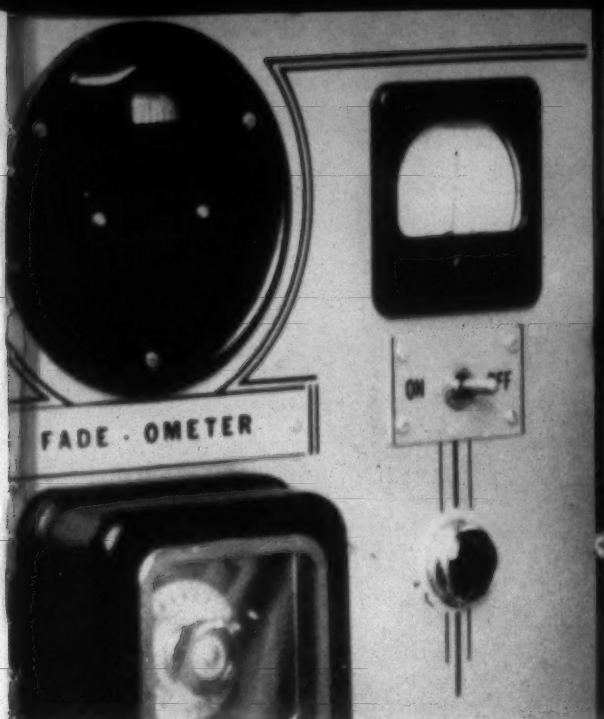
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## 250,000 decisions... only 4 mistakes!

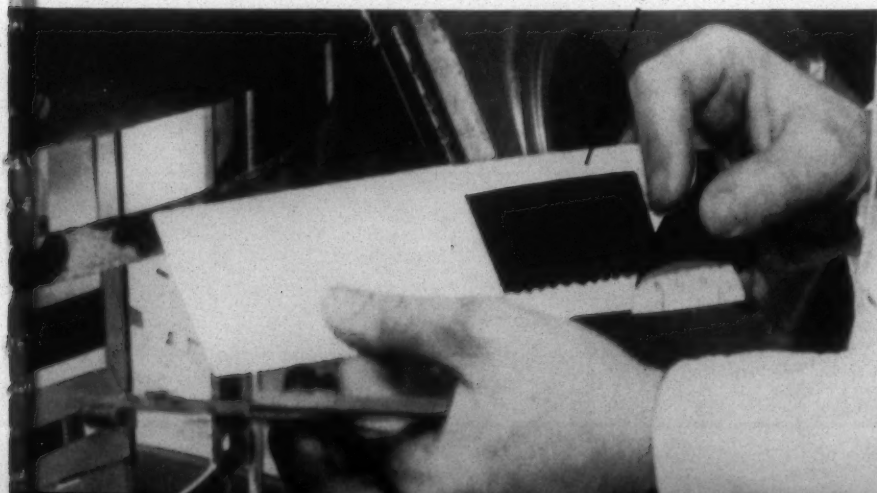
Infallibility is non-existent here below, but National Aniline approaches it in its shade cards!

We have published over a quarter million color ratings. To date *only four have been successfully challenged!* Of these, two were errors of over-conservatism in which we rated colors lower than they deserved.

This remarkable record is clear proof of the absolute objectivity with which National presents its products... a source of pride in the integrity as well as the skill and experience of our technical personnel.

National shade cards and bulletins give you reliable standards by which to judge colors in advance. Our Color Standardization Laboratory assures you that every shipment will be up to specifications. Colors will perform as anticipated, without specking, lack of shade-uniformity or other difficulties due to variations in strength and purity.

You are entitled to this high standard of integrity, quality and service. You get it when you do business with National!

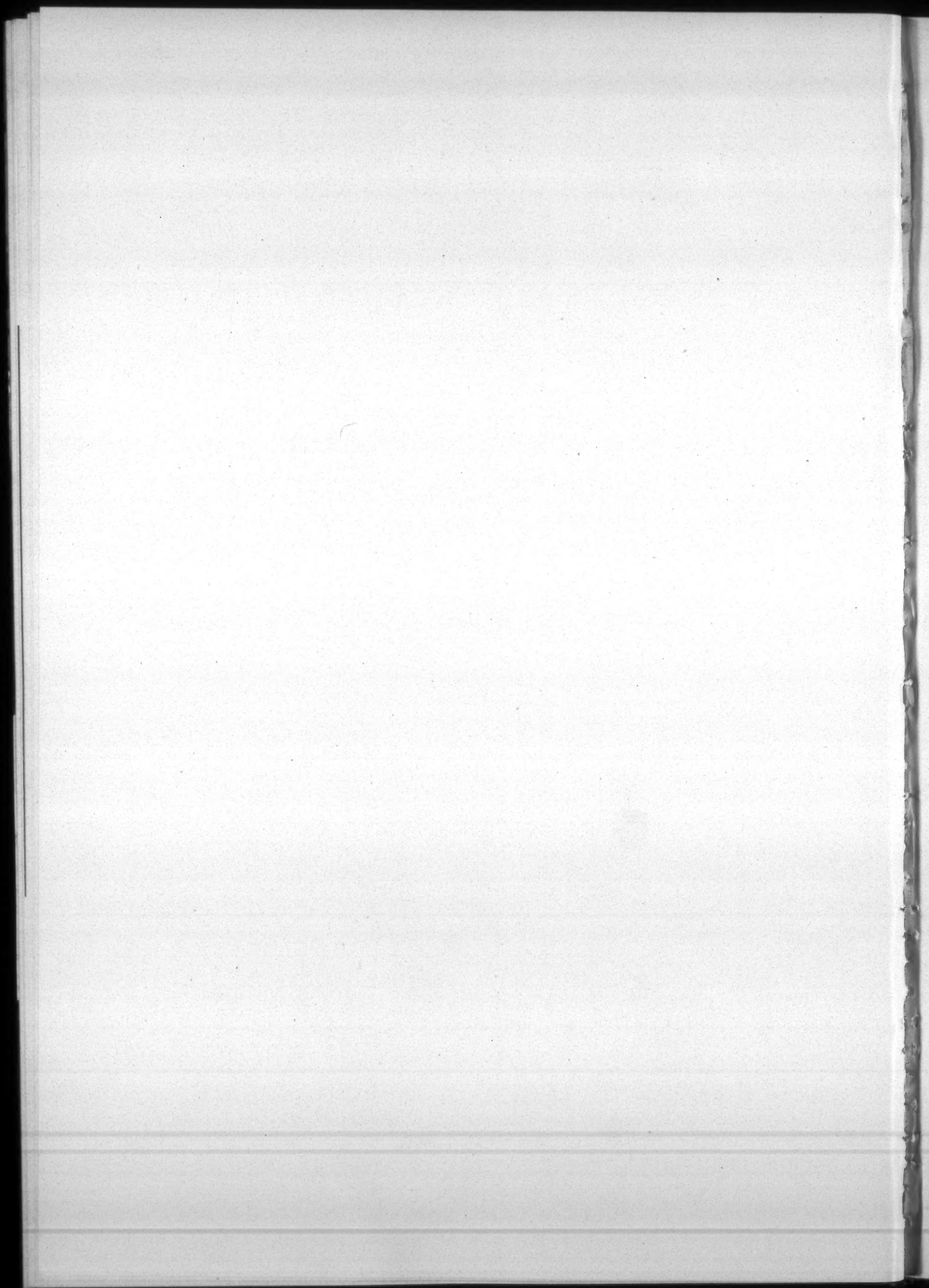


**NATIONAL ANILINE DIVISION**  
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# HARTOFIX C.P.



## *Hartofix C. P. stops water bleeding!*

If you would like to be absolutely sure that *your* fabrics will never be the cause of these little domestic tragedies, always specify selected direct dyeings aftertreated with HARTOFIX C.P.

HARTOFIX C.P. stops water bleeding, prevents perspiration staining, and improves wash resistance of direct dyeings or prints on cellulosic fibers . . . especially tailored for application with resin finishes. And by eliminating the need of expensive fast dyes, HARTOFIX C.P. actually saves you money!

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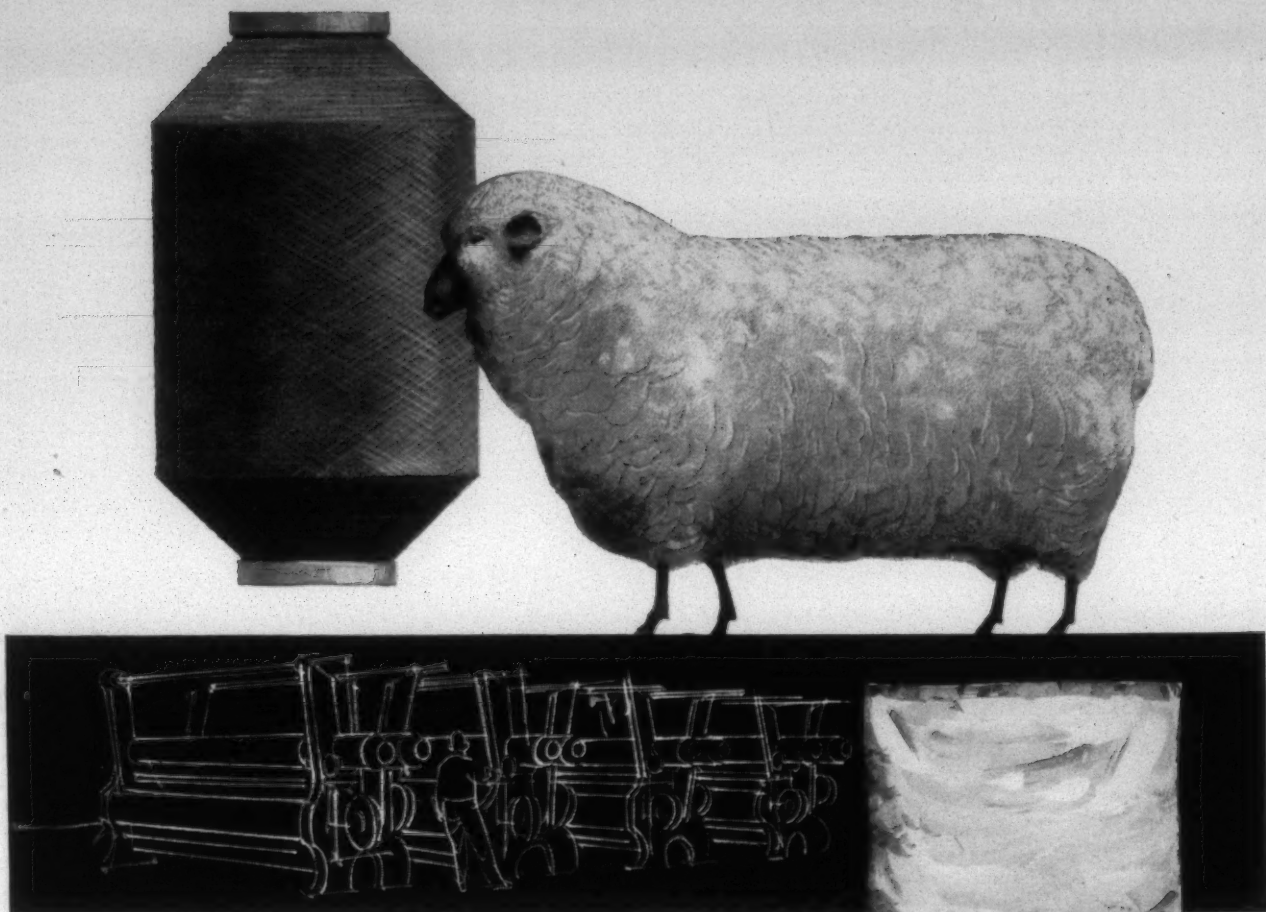
*the Hart Products Corporation*

1440 BROADWAY, NEW YORK 18, N. Y.

Works and Laboratories, Jersey City, N. J.

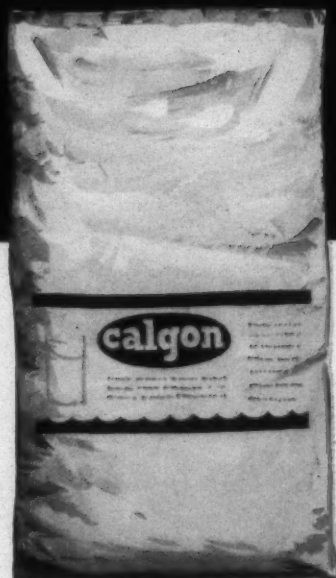
Hart Products Company of Canada, Ltd., Guelph, Ontario





*for easier and speedier  
Textile Processing*  
use **calgon**\*

In almost every phase of textile processing, Calgon can help to make operations speedier, easier and more efficient. Calgon saves you money in two ways: first, it costs so little; and second, the use of Calgon results in fewer seconds, fewer re-dyes, less time in scouring and control of iron contamination. Write for the new brochure "Calgon Data for the Textile Chemist" today.



*Here are some of the ways Calgon may be applied:*

**Calgon Conditions Water:** Calgon prevents the formation of lime soap curds and acts as a solvent for lime soap as well. Calgon makes water rain-barrel soft.

**Calgon In Scouring or Rinse Baths:** Calgon supplements the detergent action of soaps and synthetic detergents. Calgon stops soap precipitation in hard water.

**Calgon In the Dyebath:** Calgon exerts a dispersive and solubilizing action on most dyestuffs and acts as a leveling and penetrating agent.

**Calgon Disperses Pigments:** Calgon is an excellent dispersing agent for clay, calcium carbonate, titanium dioxide and other pigments.

**Calgon Penetrates Pigmented Rayons:** Calgon assists the penetration of dyes in pigmented rayon resulting in deeper

and brighter shades. Calgon stops scum formation assuring more even color.

**Threshold Treatment for Corrosion Control†:** Calgon prevents the contamination of process water from iron corrosion products. Calgon Threshold Treatment is the most economical and efficient method for eliminating iron contamination.

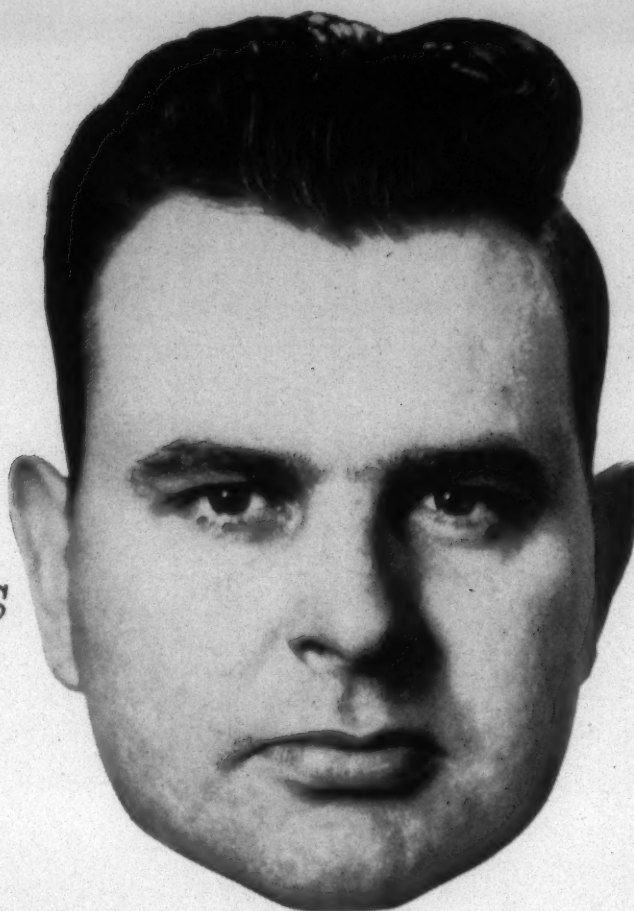
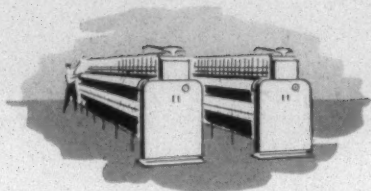
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HAGAN BUILDING • PITTSBURGH 30, PA.





*"...Higher loom speeds  
made lubrication  
difficult!"*

When a large Southern weaving plant recently had a problem in loom drive lubrication, Sinclair's Representative V. V. Motley, Jr. was asked for a recommendation. He reports:

"This plant had experienced difficulty in lubricating the gear trains that drive the looms. The reduction gears are shielded and the pinions rotate at about 1700 RPM. A grease could not be applied readily or satisfactorily; and, an oil did not provide the retention necessary for the desired lubrication period. In desperation, mixtures of oil and grease had been used in an attempt to lubricate the gears."

**NEEDED: AN ADHESIVE OIL.** Mr. Motley continues, "Having had experience with problems of this type, I recommended Sinclair DARTAC #15. I knew it would have the necessary body and adhesiveness needed to solve the problem. Trial runs at this plant were so successful that all four of the company's plants were switched to DARTAC" concludes Mr. Motley.

If you have a problem in textile lubrication, get the benefit of a Sinclair Representative's recommendation. Call a local Sinclair office or write to Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

**SINCLAIR TEXTILE LUBRICANTS**



# Statistics make headlines... *but* Performance makes Profits!

Statistics for machine production often make news, but actual machine performance plays the decisive part in creating mill profits. The performance of Whitin Superflex Spinning frames and the profits they are producing now in many leading mills are the best test of their true worth. That's why Whitin Superflex Spinning frames are the continuing and growing choice of mills demanding maximum yarn quality and minimum spinning costs — the essential ingredients of profits.



## . so look at the profit-producing performance

Photographs show recent installations of  
Whitin Superflex Spinning Frames







## ce of Whitin SUPERFLEX\* SPINNING

As a specific example of the advanced economies and practical benefits that can be secured with Whitin Superflex Spinning frames, the following mill data is

presented, based on actual operating conditions in the production of high quality print cloth, 80 x 80, 39", 4.00 yds./lb., 31's warp and 41's filling.

	Warp	Filling		Warp	Filling
Yarn No.	31's	41's	Front Roll Speed	138	140
Gauge	3 1/2"	3"	% Efficiency	95	95
Ring	2"	1 1/8"	Lbs./Spdle./Hr.	.0265	.0203
Traverse	11"	7"	Lbs./Spdle./120 Hrs.	3.180	2.436
Wt./Yn./Bobbin	.345 lbs.	.119 lbs.	Spdles./Operator	3900	3864
Spindle R.P.M.	10,300	11,000	Labor cost per lb. including all direct and indirect help in Spinning Room . . . . . \$0.03322		
Traveler Speed, F.P.M.	5376	4140			
Twist Multiplier	4.25	3.90			
T.P.I.	23.7	25.0			



*For complete information ask your Whitin representative or write direct to us.*

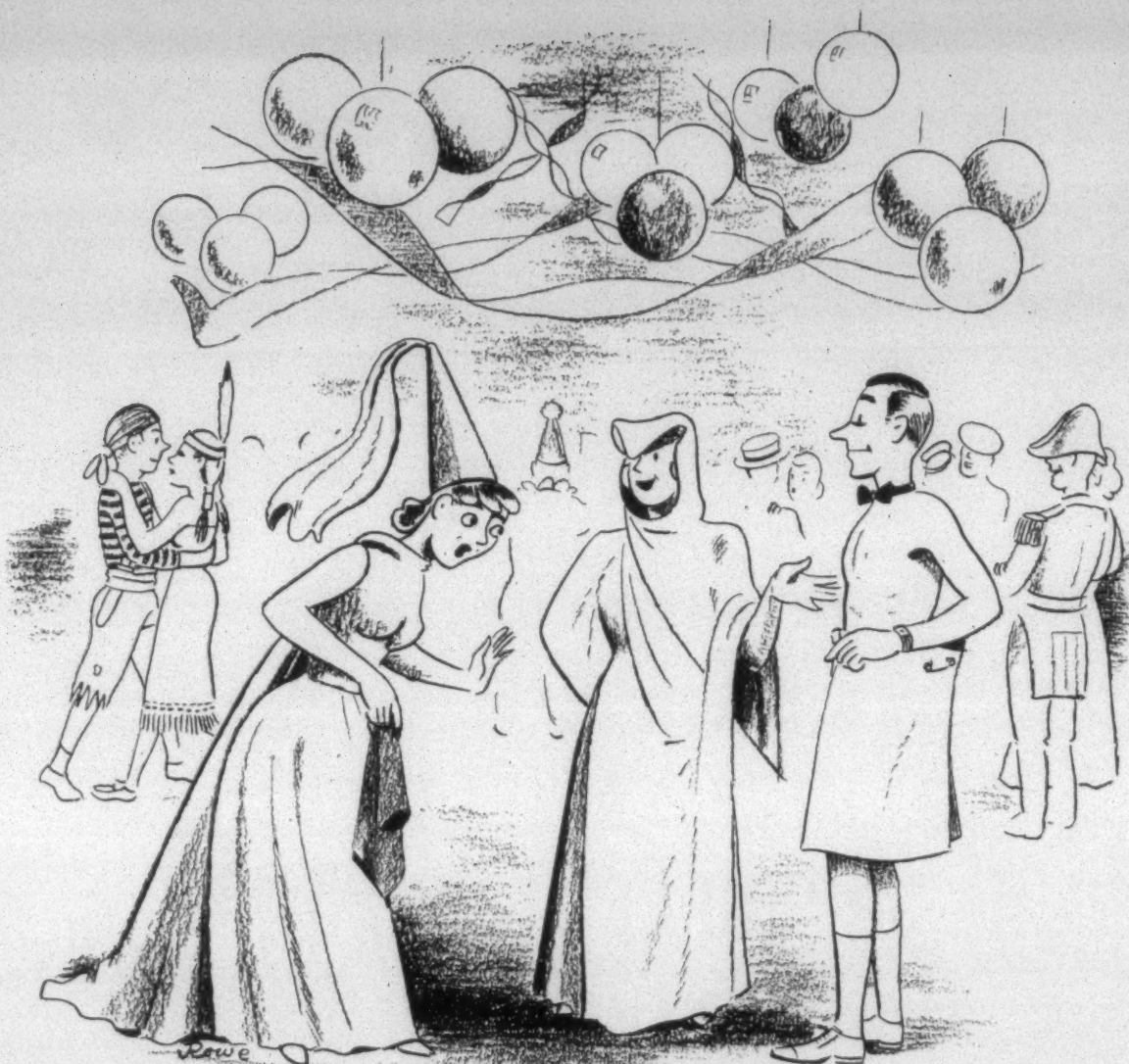
# Whitin

## MACHINE WORKS

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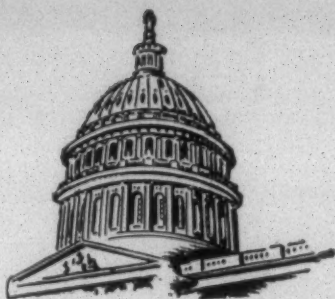
"I told him to wear a nice white sheet . . . and he thought I meant DILLARD paper!"

# *Dillard* PAPER COMPANY

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1926 "IF IT'S PAPER" 1956





# WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

It was a personal landslide for Eisenhower and Nixon, one of the greatest in national history, but with Democrats winning control of both the House and Senate. No outstanding member of the House or Senate was defeated. Leadership and party controls remain as they were in the previous Congress. From a legislative standpoint the situation is unchanged, and the new Congress will take up at the same point that the old Congress left off.

Southern senators and House members retain their high-ranking positions in leadership and committee assignments, based on long service. The Democratic majority in the House is slightly increased, which assures the re-election of Mr. Rayburn as Speaker by a slightly larger majority. Only the place that has been filled by Senator George in the top leadership of the Senate will be vacant. Bi-partisan support of the President in foreign policy will be the rule.

Congress will be dominated again by a coalition of Republicans and Southern Democrats, more pronounced in the House. A majority of committees in both branches will be headed by Southern members as chairmen, and most of the remaining committees will have a Southern member in second place on the majority side.

The "farm revolt," so long and earnestly forecast, did not take place in the voting, and farm policies of this Administration are not likely to be disturbed. It is likely, however, that the President will put forward an enlarged program of encouragement and assistance to farming, designed to reduce the heavy surpluses held by the government, and to put small farmers on a better economic basis.

Smarting in the worst defeat at the polls they have ever sustained, the labor unions are turning their attention to the legislatures that will meet in 44 states next year. The aim is to prevent the enactment of more right-to-work laws, and to secure the repeal of some of these laws now on the books. A much wider application of the minimum wage law will be sought, with higher rates of unemployment compensation.

The President does not visualize an easy course with the new Congress, although he will very earnestly seek co-operation with its leadership. He will offer a high and broad pattern for national advancement and growth to Congress, and seek to define a middle-of-the-road course in national problems on which both political parties can move. He has the advantage of great personal popularity, and a stupendous election victory, which will serve him well in the first session of Congress.

With the single exception of the presidential contest, Democratic leaders feel that with Congressional and state victories they are winners in the election. The President's lead was astronomical in some states that went heavily Democratic otherwise. The Democratic leaders count it a personal victory for Eisenhower rather than for the Republicans. They do not concede they were defeated either at the Congressional or state levels.

Disturbed conditions in the Middle East will exert a sobering effect on the new Congress, with united effort to avoid involvement. Higher expenditures



for national defense are in prospect next year, and a reduction in taxes is not in sight. Congress may give a more responsible performance than in the last session, but there will be infighting. The Democrats in the new Congress are relatively stronger and as well organized as in the last session.

Southern legislators are determined that the session shall not be cluttered with disputes and arguments over civil rights and school integration. They will not go along with the Administration attempt to force integration on the South, or even to give sanction to civil rights demands of radicals and racists in the North. Unless the President can come to an agreement with Southerners on a legislative agenda, the outlook for his program could become bleak.

Few elections have come up with so many perplexing results as this one in 1956, and with so many curious explanations for the outcome. Labor worked as never before to pile up a huge registration of its members in states that went pell-mell for Eisenhower. Other states had harder battles over proposed right-to-work laws than they did for presidential candidates. Nevada defeated a proposal to repeal its right-to-work law, 45,172 to 39,081.

Re-election of Wayne Morse to the Senate is counted by the union bosses as their most significant victory. They made heavy donations to Morse. They strongly supported Magnuson in Washington, and counted defeat of a proposed right-to-work law in Washington as an outstanding victory. They claimed victory in Kansas where a Democratic governor was elected over a Republican who advocated a right-to-work law. They counted election of a Democratic senator in Colorado, and defeat of Republican House member Dewey Short in Missouri, as victories.

A wholly new crop of leaders in both parties can be expected to develop in the next four years, due to the age of the present leaders. Younger members of the Senate are pushing forward for more recognition; in the House several of its oldest and ablest leaders have retired this year after refusing to stand for re-election. Some others intend to retire at the end of two years.

Already the union leaders are preparing for their effort in the campaign of 1958, when they will concentrate on House and Senate members and state legislatures. They believe about 75 per cent of the union membership was registered before this election; they will tighten efforts to register their members. Chief objective on the state legislatures will be repeal, or prevention of passage, of right-to-work laws.

Retention of the present Cabinet in the next Administration is highly improbable, and possibly all key figures will be missing. Tenure of Attorney General Brownell will not be for long if the President is to preserve peace with key leaders in Congress. Defense Secretary Wilson and Treasury Secretary Humphrey want to retire soon. Interior Ex-Secretary McKay will not return to the Cabinet, and Mr. Stassen is not expected to be given a Cabinet post. Secretary of State Dulles may retire even before the new Administration starts.

All unions will join together to urge Congress to broaden terms and coverage of the minimum wage law, although not asking now for a higher hourly rate. They would have its provisions apply automatically where any Federal spending is involved. In particular, they want it to apply to school aid construction, and to any road building that is incidental to the national highway program. Another provision to be sought would prevent state right-to-work laws applying to any construction related to federal funds or grants.

The Supreme Court is deciding a larger number of labor issues at this term than at any previous time in its history. New cases are being filed almost daily. Involved in the cases coming up are issues related to state right-to-work laws, and picketing for a closed shop. Other pending cases involve political spending by unions, authority of federal district courts to compel arbitration, and a right to strike during a long term contract.



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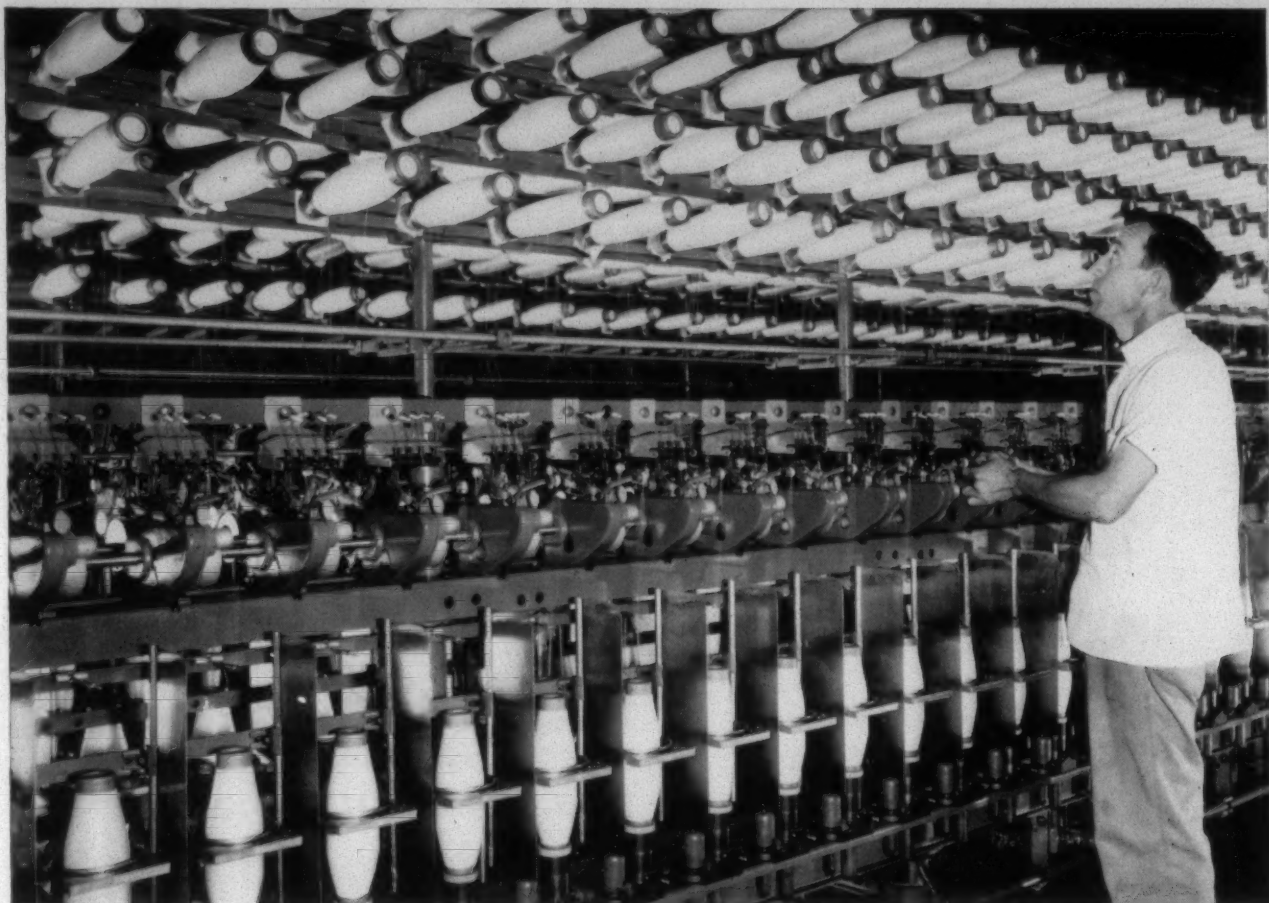
<sup>\*</sup>Reg. U. S. Pat. Off.



# AAP

AMERICAN ANILINE PRODUCTS, INC.





Leesona Model 10 Ring Twisters processing glass yarn at the Seguin, Texas, plant of the Coast Manufacturing and Supply Company. The firm produces Trevarno Glass Fabrics.

## Producers of TREVARNO GLASS FABRICS chose Leesona Model 10 Ring Twisters

Years of research and planning went into the decision of Coast Manufacturing and Supply Company to enter the textile industry as processors and weavers of glass cloth. The 85-year-old Livermore, California, firm, with a long history in the manufacturing and distribution of safety fuse for the mining and construction industries, made the carefully-planned move into textiles in 1947.

Ralph E. Merritt, president of the firm, reports:

*"After evaluating other types of twisting equipment, Coast Manufacturing and Supply Company decided upon the Leesona Model 10 Ring Twister."*

Model 10's are used exclusively in Coast Manufac-

turing's 800-spindle twister installation in Seguin, Texas, producing a double-tapered package which can be used directly for filling and warping operations without rewinding.

Versatile Leesona Model 10's can also produce a tapered top or straight wind package. They are ideal for processing not only glass yarn, but rayon, spun rayon, nylon, silk, wool, worsted, cotton and combination yarns, and the new bulk and stretch yarns as well.

### Make Your Own Evaluation

See how flexible Leesona Model 10 Ring Twisters can improve your own twisting operations. See your Universal representative or write direct.

23.6.11




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Winding and Twisting Machinery for Natural and Synthetic Yarns





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Westvaco alkalis are engineered to meet the user's needs. For each alkali produced, statistical determinations are made of the allowable quality variations. Rigid limits are set on key variables known to be of vital concern to the customer. Strict controls over processing maintain these standards and each shipment is analyzed to make sure it meets specifications.

The customer is always assured of uniform, top quality. Moreover, he knows exactly what he is getting in every shipment.

Effective quality control is one more reason why Westvaco is your most dependable source of supply on alkalis.



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**FMC CHEMICALS INCLUDE:** BECCO Peroxygen Chemicals • WESTVACO Alkalies, Chlorinated Chemicals and Carbon Bisulfide • NIAGARA Insecticides, Fungicides and Industrial Sulphur • OHIO-APEX Plasticizers and Chemicals FAIRFIELD Pesticide Compounds and Organic Chemicals • WESTVACO Phosphates, Barium and Magnesium Chemicals



# PRECISION PADDING AND PRINTING

with **COLOR** by

# INDIGOSOL\*

Through the modern methods of scientific precision padding and printing, Indigosol insures perfect color reproduction for those pastel shades on cotton, linen, viscose and wool.

Indigosol skillfully produces color at its best . . . colors that are most economical for extreme fastness and light shades, easy to apply, level, stable and readily dissolved.

Spur customers to action at the point of sale.

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Our application laboratories are daily solving new, difficult color matching problems through the accuracy of precision padding and printing. Years of experience and research have equipped us to furnish the exact color you require . . . exactly - with speed, efficiency, economy. Write us now for full information.

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# IMPACT

## ***Knocks the stuffing out of size costs in a Gaulin Homogenizer***

Away with the old, and in with the new. Converting size particles by cooking is rapidly becoming the old fashioned expensive way. Hundreds of America's leading mills have found the mechanical conversion of a Gaulin Homogenizer costs less and does a better, more uniform job.

A Gaulin shears, expands and explodes size particles under tremendous speed and pressure. Makes them uniformly finer, faster.

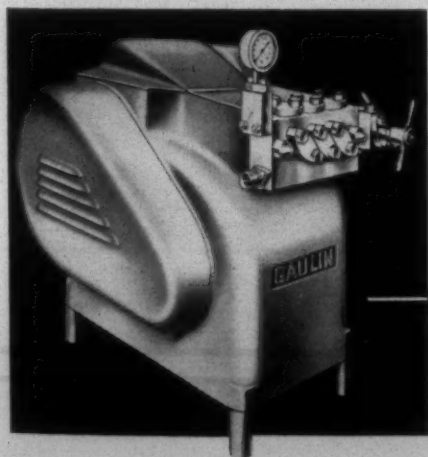
The result? Mills using this process claim greater uniformity of added size on Gaulin Homogenized warp. Report improved size penetration of their yarn, and say the quality of the warp yarn is greatly improved.

Mills that have tried it now have their entire production on Gaulin Homogenized Size. Experience proves that a Gaulin usually pays for itself in less than 12 months.

Give a Gaulin Homogenizer a test in your mill. We'll be glad to install one for you on a guaranteed-performance basis. Whether you're making cottons, worsteds, or synthetics, write asking for one of our sales engineers to call.

**MANTON-GAULIN MFG. CO., INC.**  
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*Southern Representative:*  
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# **Gaulin**



## **HOMOGENIZERS**

WORLD'S LARGEST MANUFACTURER OF HOMOGENIZERS,  
TRIPLEX STAINLESS-STEEL HIGH PRESSURE PUMPS,  
AND COLLOID MILLS



*You get*

**Totally NEW FABRIC EFFECTS**

*... plus Shrinkproofing.*



*with the unique*

## **RIGGS & LOMBARD COMPACTING MACHINE**

Now you can command an extraordinary range of special effects—through new compacting methods which enhance the basic structure of goods in unprecedented fashion and *at the same time* shrinkproofs to commercial standards or better.

The R & L compacting machine, particularly designed to practice the new methods, excitingly transforms woven and non-woven fabrics and yarns of many types by mechanical methods—no chemicals! Nubby fabrics look nubbier, patterned weaves are accentuated with depth dimension added... and, after these mere beginnings, possibilities for further developments are practically unlimited. Yarns come up much loftier, for use in new and superior yarn-dyed fabrics.

This compacting machine handles a wide range of weights and types from very light to heavy fabrics

such as carpeting, and a variety of yarn counts consisting of any fiber or blend. Reasonable in cost, and needing minimum floor space, it can be synchronized for in-line production at relatively high speeds. Replaces sponging process before tailoring on wool, worsted, blended fabrics—also achieves fine felting effects on worsteds and synthetic fabrics.

Riggs & Lombard collaborated in development of this machine for practicing the new compacting methods on woven and non-woven fabrics and yarns of many types. Now we are sole manufacturers and distributors of this machine in these fields, under licenses from the originators, Fabric Research Laboratories, Inc. Write for complete data. Find out how we helped engineer this new machine—and can engineer an installation that will assure *you* of immediately profitable new fabric effects.



### **RIGGS & LOMBARD, INC.**

Foot of Suffolk Street, Lowell, Mass.

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#### *Samples For Free Testing*

We can arrange for test run on yarns or fabrics to show shrinkproofing and extraordinary new effects—or to have a representative call to show profit potential in your operation. Just write or phone—no obligation.

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### ***Eliminates Lumps and Flakes When Carding Synthetics***

It is precision built . . . . . machined to your specifications and tolerances by GOSSETT technicians. The extra long spring steel wire fillets are guaranteed to fluff all synthetic fibers from the card cylinder thus enabling the doffer to pick them off evenly. Further, the GOSSETT Card Fancy fluffs the synthetic fibers so well that the doffer will pull off and make as good a sliver as you have ever seen.

*When you install the improved GOSSETT Card Fancy there will be no more excess loading on the cylinder. Write at once for full particulars and estimated cost.*

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# **GOSSETT**

# **Machine Works, Inc.**

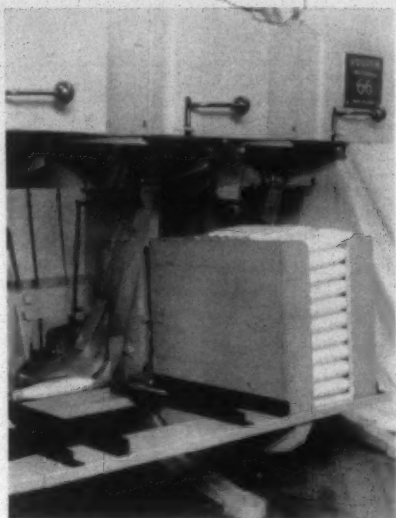
GASTONIA, NORTH CAROLINA



# For the Textile Industry's Use

## — NEW MACHINERY, EQUIPMENT AND SUPPLIES —

### Filling Box Stacker



Filling box stacker for Foster-Muschamp Model 66 automatic filling winder (Foster Machine Co.)

Foster Machine Co. reports its unique filling box stacker for the Foster-Muschamp Model 66 automatic filling winder reduces battery hand costs by an estimated 50% over conventional filling trucks or buggy systems. Supplied as optional equipment for Model 66, the stacker attachment is designed for use with spun yarns. The wound bobbins are automatically doffed, conveyed to and placed in a filling box under each spindle. Bobbins are laid parallel to each other in the box, with all butt ends on the same side of the box.

Other equipment for the new Foster-Muschamp filling winder includes a centralized hopper for bobbin replenishment, holding upward of 2,000 bobbins, which automatically conveys bobbins to the winding spindles without any attention from the operator. An automatic pinboarding device is available for use in mills handling synthetic filament yarns, where it is highly important to keep yarn clean and protected from chafing, etc. This device automatically places the full bobbins on pinboards. Also available as optional equipment is an automatic traveling lint cleaning attachment which removes lint, nips and fly present during the winding of spun yarns.

Because Foster-Muschamp Model 66 is a fully automatic superspeed (15,000 r.p.m.) bobbin winder, it is said to assure the lowest winding cost yet achieved. Estimates are that production per operator and per spindle is higher than can be attained by any other past or current winding equipment. Model 66 is reported to wind equally well all types and counts of yarn, from coarse cotton, wool or worsted to the finest counts of nylon, Dacron or other synthetic fibers,

without the use of extra attachments or complicated adjustments.

Model 66 is described as "the nearest approach to theoretically perfect bobbin building yet obtainable." Exclusive features of machine design which contribute to this efficiency include: elimination of starting tail; a close delivery thread guide which travels in a line practically parallel with the angle of the chase, reducing lash and strain and eliminating looping, piling, distorted angles and false tension; a simple, effective layer-locking device which prevents sloughing; and a feelerless guide which lays the yarn on the bobbin in a predetermined precise and uniform manner.

Foster points out that automatic operation has been developed to such a degree in Model 66 that the operator can concentrate on maintaining quality, while the usual routine tasks are performed more accurately by mechanical means. Obvious result is greater productivity per man-hour, with lower operating cost.

Full information on the Foster-Muschamp Model 66 automatic filling winder—as well as on the filling box stacker and other optional features—can be obtained by filling out this journal's postage-free reader service request card. (Request Item No. K-1)

### Full-Range Color Program For Kolorbon Carpet Rayon

Hartford Rayon Co. reports it has developed a full-range color program that makes it possible for manufacturers to style solution-dyed carpets in their own individualized colors from an almost unlimited selection. According to the company, the full-range color program offers users of Kolorbon solution-dyed carpet rayon staple entirely new dimensions of style and design as well as color flexibility.

Success of the new program in creating new colors is due largely to the spinning versatility imparted by the 8-denier fiber introduced by Hartford recently. Previously only 15-denier dyed fiber had been manufactured. The controlled blending of 8 and 15-denier fibers holds the key to the effective creation of yarn in new colors. In addition, yarn blended of 15-denier dull and 8-denier bright produces carpet with fuller "bloom" and more uniform color than could be obtained with 15-denier fiber alone, the company points out.

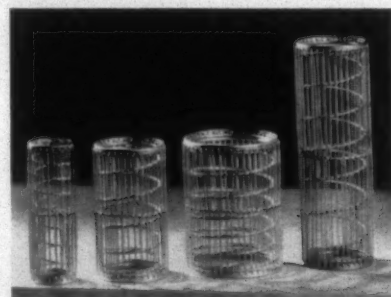
Using staple in 10 of the basic colors of the Kolorbon line, Hartford Rayon's technical staff has produced dramatic style variations and original hues by combining various proportions of basic staple with each other or with white during the yarn spinning operations. In one combination, a controlled blending of mint green and turquoise, a fresh "teal" colored yarn results.

In another, a blending of sandalwood and white produces a subtle beige, and a radiant iridescence is obtained through a mint green and white combination.

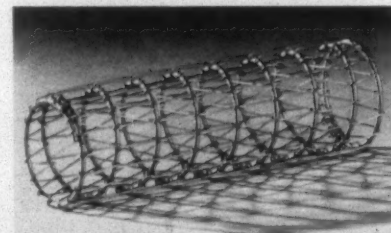
Since the program's inception, the company has introduced 3 new colors—Melon, Capri Blue and Charcoal Grey—which can be blended in the same manner as the company's other basic colors. The firm's technical advisory service is available to help yarn spinners and carpet manufacturers establish operational techniques that will bring a new individuality to their solution-dyed carpet rayon programs, Hartford points out.

(Request Item No. K-2)

### Dye Springs



Scholl springs of various size.



Davidson dye spring (Parrott & Ballentine Textile Equipment Co.)

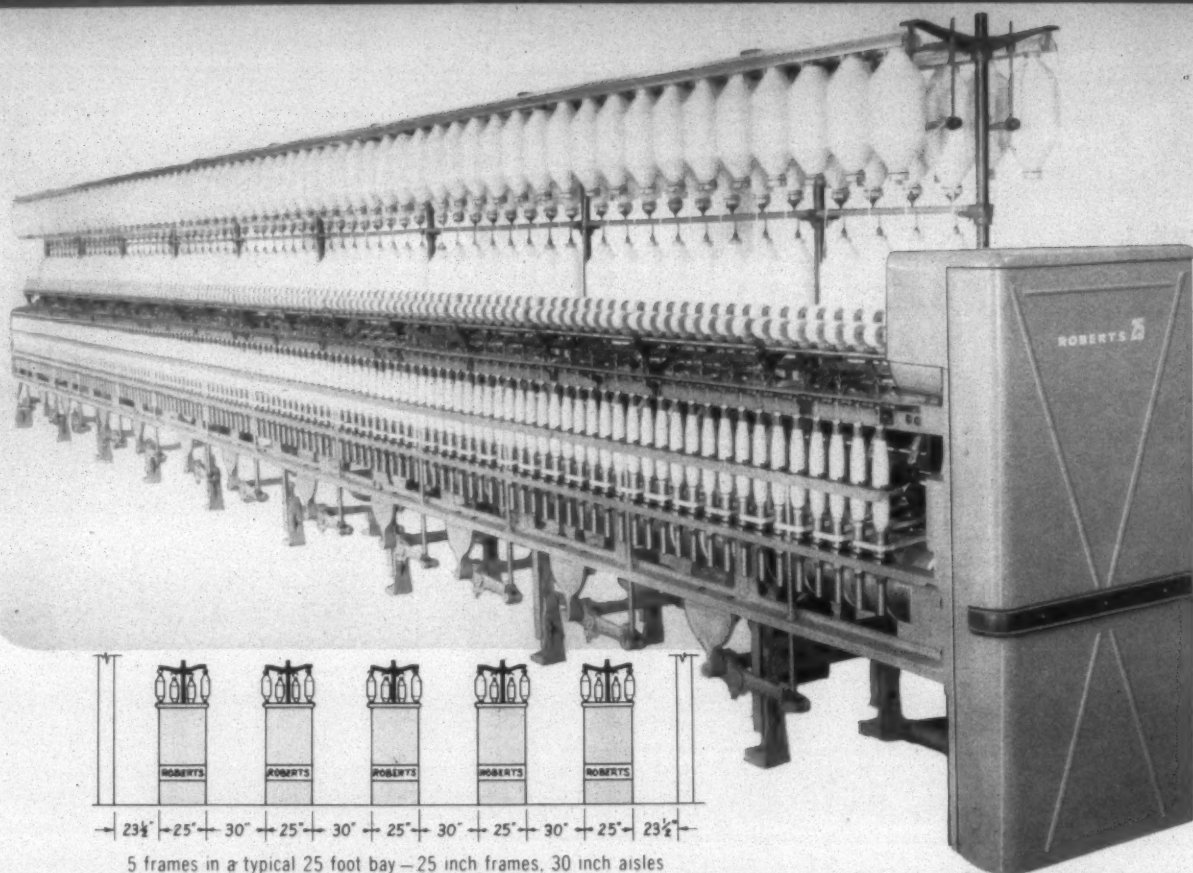
Parrott & Ballentine Textile Equipment Co., exclusive distributor in this country for Davidson, MacGregor & Co. Ltd., London, England, has announced the development of the Scholl dye spring. This spring is being manufactured in the popular 1 7/8" diameter by 6 3/4" length size, and Parrott & Ballentine reports its unique design permits manufacture of large diameters or long lengths with a minimum of increase in cost.

Parrott & Ballentine since 1952 has been offering the stainless steel Davidson dye springs, and reports that the Coats & Clark Co. in Toccoa, Ga., now has over 300,000 of them in use in the Toccoa plant. As compared with dye tubes, Parrott & Ballentine points out, the Davidson dye spring permits loading of 25% to 50% more poundage of yarn in the same dyeing machine. This results in such operating economies as short liquor ratios, large dye lots and less labor



# ROBERTS 25 SPINNING FRAME

- 25 inches wide
- 25% more yarn from same floor space
- 25% less building for same production
- 25% saving in building and utility cost



**TRIED AND PROVEN.** The Roberts 25 Spinning Frame is simple and straightforward, free from radical innovations or gadgets. It embodies all the tried and proven features most wanted in a modern spinning frame giving highest production and lowest maintenance.

**ROBERTS DRAFTING.** Roberts Double-Apron Drafting produces highest break factors, best yarn evenness and lowest ends down in a range of drafts from 10 to 60, for yarn numbers from 2's to 100's, in cotton, synthetics or blends.

**SMALL, MEDIUM OR LARGE PACKAGES.** The Roberts 25 Spinning Frame is available in gauges from 3 inches to 4½ inches and can be arranged for direct filling on 8 or 8½ inch quills or for warp up to a 3 inch ring and 12 inch bobbin.

## COMPARE ALL 3

For high production, top yarn quality, large packages, low maintenance expense, dependability—and, at the lowest investment per spindle—Roberts Spinning is second to none in America today.

**ALL BALL BEARING HEAD.** The all ball bearing head design is outstanding in its simplicity and flexibility. Thirty greased-for-life ball bearings of one size are used and all plain bearings and studs eliminated. All gears in the head are hardened and have one pitch, one width, one bore and one size key, making them completely interchangeable. Two wrench sizes fit all shafts and tightening points. Draft Constant can be varied simply from 400 to 3200 and Lay adjusted for coarse or fine numbers by a simple gear change.

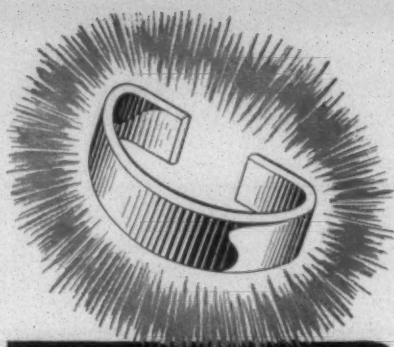
## STANDARD FEATURES

Included as standard equipment are Roberts Ball Bearing Spindles, Roberts built-in Suction Cleaning, Roberts AeroCreels and 8 inch Cylinder Drives.

# ROBERTS COMPANY

SANFORD, NORTH CAROLINA





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JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.  
CRAWFORD "JACK" RHYMER, BOX 2261, GREENVILLE, S. C.

#### FOR THE TEXTILE INDUSTRY'S USE—

required per pound of yarn processed. With the recent development of high-speed extractor drying equipment, this type dye spring has become more attractive than ever, Parrott & Ballentine reports.

(Request Item No. K-3)

#### Chromspun & Estron Fibers For Floor Covering Field

Eastman-Chemical Products Inc. has announced its entry into the floor coverings field with newly-developed heavy-denier lofted Chromspun and Estron acetate continuous filament yarns designed especially for tufted rugs and carpeting. The company reports that exhaustive tests were conducted by Tennessee Eastman Co., Eastman's corporate associate, over an extended period of time to establish the following advantages of lofted Eastman acetate carpeting and rug fibers over other traditional fibers: (1) Greater resistance to matting and packing in traffic areas. (2) Better recovery from pile depression caused by table and chair legs or other furniture. (3) Superior resistance to soiling compared with other man-made fibers. (4) Ease of cleaning without pilling or destroying texture, color, or appearance. Faster drying rate than most rug fibers, such as wool or rayon. (5) No shedding of pile, as is encountered with wool and other spun yarns. (6) Cleaner, less fuzzy surface makes it more difficult for lint particles to adhere to the carpet or rug surface, and easier to remove those that do. (7) Surface texture is readily restored by vacuuming. (8) Better pattern definition in loop pile pattern rugs because lofted Eastman rug fibers stand erect. (9) The ability to obtain with continuous filament yarns, textures identical with those using spun staple yarns, without the inherent disadvantages of spun yarns. (10) Outstanding color fastness due to Chromspun, the Eastman made-in-color fiber. Chromspun completely eliminates variations in the color of piece dyes from selvage to selvage, or roll to roll. Chromspun makes possible easy removal of the most stubborn spots without damage to carpet colors. (11) Brighter initial and longer lasting color. (12) Immunity to rot, mildew, mold, moths and silverfish. (13) Extremely soft, luxurious hand in small rugs in which Eastman 8-denier-per-filament fiber is used. (14) More uniform yarn with no slubs and fewer splices.

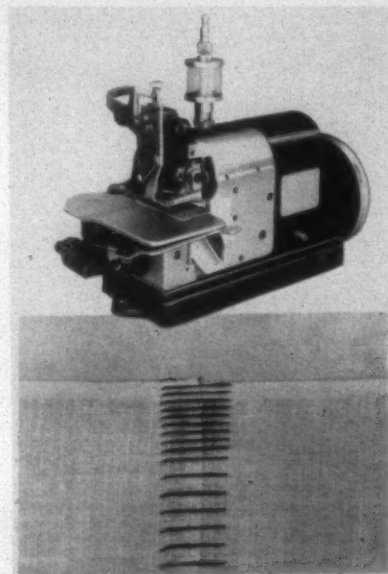
Chromspun, the Eastman made-in-color fiber, and Estron, its uncolored (white) counterpart, are already familiar in sizes ranging from 55 to 900 deniers. Regular, crystal and lofted forms of both Eastman fibers are used extensively in many different types of fabrics for home furnishings and apparel products. Development of the new heavy-denier carpet yarns, available in 2,200, 2,700 and 5,300 deniers, marks the first time Eastman has produced a fiber designed for the carpet and rug industry.

The new heavy-denier lofted Chromspun yarns will be produced in a broad range of selected colors. Of particular importance is the fact that Chromspun is said to offer a color consistency never before available,

along with color fastness and other characteristics identified with Chromspun in other products. Twelve selected delustered colors have been especially prepared for the carpet trade in addition to the 25 bright colors in the regular Chromspun line. New production facilities are being installed to produce the heavy-denier lofted Chromspun and Estron yarns, and commercial quantities are scheduled for January 1957.

(Request Item No. K-4)

#### Merrow Seaming Machine



Style 60-Y3B butted seaming machine  
(The Merrow Machine Co.)

The Merrow Machine Co. has introduced a new Style 60-Y3B butted seaming machine. The company points out that incorporation of the "Y mechanism" into the machine makes possible a butted seam with more stitches per inch at the selvages of the cloth than in the center. Having this stronger seam at the selvages helps prevent "wrinkle backs" from occurring along the selvages during processing of the cloth. Width of the butted seam when opened flat during processing is approximately  $\frac{3}{8}$ ". The 1-thread butted seam produced by the 60-Y3B is quickly and accurately formed by the high-speed machine and can be easily removed after cloth has been processed. Net result is a considerable saving of time, effort and material in the continuous finishing of a wide variety of fabrics, Merrow points out.

(Request Item No. K-5)

#### Caprolan Nylon Filament Yarns In Finer Deniers

Caprolan nylon filament yarns are now available for sampling purposes in a range of finer deniers, reports the National Aniline Division of Allied Chemical & Dye Corp. For the past 11 months the company has been in commercial production on Caprolan heavy yarns, ranging from 2,000 to 50,000 denier.

Run-in procedures have been completed and production has begun on bright 200-denier, 32-filament,  $\frac{1}{2}$ -turn, Z-twist regu-





**Uvitex<sup>®</sup>**

**TXS Conc.**

**Uvitex**

**RT**

**SOMETHING EXTRA**

**IN white**

**UVITEX TXS Conc.** produces outstanding whites on cottons and rayons—by exhaust application.

Because whiter whites move merchandise, the finishing of white fabrics calls for a higher degree of whiteness than ever.

**UVITEX RT**, for cotton, wool, nylon and other fibers. Applied from neutral bath at room temperature or in hot dyebath. Compatible in finishing bath.

**C I B A**



**Fast Shades faster  
with the**

**Cibalans<sup>®</sup>**

**Extend their use  
with ...**

### **Cibalan Salt S**

enables wool to be dyed with Cibalan  
colors in acid bath (pH 3-7)

### **Cibalan Salt S**

provides exhaustion control of  
Cibalan colors in nylon dyeing

### **Cibalan Salt S**

permits Cibalan dyeing of wool or nylon  
at any processing stage, with dyeing  
method adapted to suit the finish required

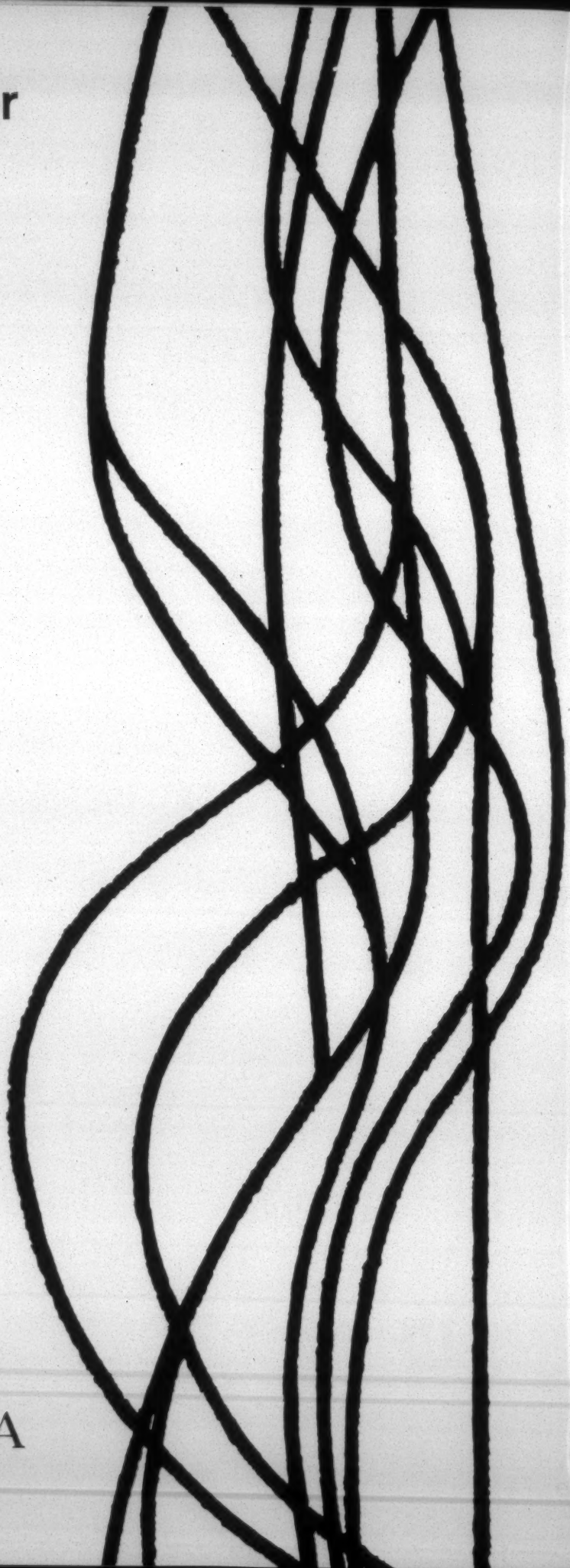
### **Cibalan Salt S**

does not affect the character of wool or nylon

### **Cibalan Salt S**

leaves fastness properties of Cibalan  
dyeings unimpaired.

**C I B A**



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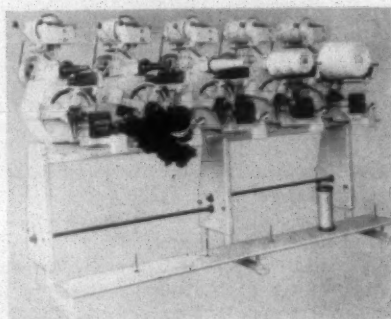
## FOR THE TEXTILE INDUSTRY'S USE—

lar-tenacity Caprolan and 560-denier, 32-filament, 1-turn, Z-twist high-tenacity Caprolan yarns. Samples of bright 210-denier, 32-filament, 1-turn, Z-twist, will also be available shortly. The 560/32 is a new number for engineered use in the new bulk-ing processes as well as in the upholstery and cordage and braiding fields.

The Caprolan high-tenacity yarns are said to offer high strength, whiteness and ready, economical dyeability in one yarn. Caprolan has an outstanding affinity for virtually every class of dyestuff including directs, acids, disperse, pre-metalized acid and the newer pre-metalized neutral dyes. Caprolan heavy yarns are now commercially available in 13 deniers and filament counts.

(Request Item No. K-6)

### Foster Model 78 Winder



Model 78 heavy-duty winder (Foster Machine Co.)

Advantages of greater simplicity and significantly reduced maintenance requirement are cited for Foster Model 78, as re-designed by Foster Machine Co. Model 78 is a widely used, heavy-duty, precise wind machine which may be equipped to wind from 6" to 10" traverse. Heavy-duty Model 78, according to Foster, is used for producing precisely wound tubes or cones of tire cord or coarse cotton, wool or synthetic yarns. It is individually motor driven and will wind packages weighing up to 35 lbs. each, in diameters up to 16". It is built in 5-spindle units, with 20" clearance between the centers of the spindles. Floor space required when drawing from bobbins is 3' by 8'3".

The operator controls the slow start on Model 78, and the control lever has a neutral position which permits free rotation of the package when the operator is tying knots. Electric stop motion and calibrated scale reportedly assure accurate and uniform package size. A heavy-duty belt gainer with convenient hand wheel adjusts the wind ratio accurately; if desired, the machine may be equipped with positive gear driven gainer attachments. It will wind over-end from bobbins or from swifts, reels or an unrolling device and can be equipped with a torque motor when used as a take-up for yarn being delivered at constant speed.

Model 78 has no idler pulleys and no long drive belts. The heads may be individually serviced without affecting the operation of the balance of the machine. Expansion-type tube and cone holders for quick doffing and donning with hand control elim-

inate loose wrenches, spurs or splines that could injure the tubes or cones. Rugged construction throughout, with simplicity of operation and lower maintenance due to new design elements are said to assure greatly prolonged life for this machine.

(Request Item No. K-7)

### New Celaperm Color

A new, more vibrant basic red has been added to the existing line of Celaperm acetate colors by Celanese Corp. of America. The new color, designated as Flare Red C-64, was developed after extensive study of various market requirements. It provides necessary brilliance and clarity for many end uses, the company reports. Celaperm colors are offered in a variety of deniers.

(Request Item No. K-8)

### Magi-Key Sheave

Introduction of new one and 2-groove Magi-Key sheaves for quick and easy speed adjustment of Texrope V-belt drives in A and B sections has been announced by Allis-Chalmers Mfg. Co. Designed for low horsepower applications, the Magi-Key sheave is said to provide for increased maximum design horsepower. For example, a Magi-Key sheave, the same size as a former 2-groove B section cast iron adjustable sheave, will handle approximately 3 times more horsepower. In the new sheave, keys transmit all rotational torque, i.e., from shaft to hub and hub to discs. Set screws no longer bite into threads. The flexibly joined set screw and key give a positive lock between the movable discs and stationary hub. Because the key and set screw always remain joined and in place, they cannot drop out during adjustment nor can they move out of alignment. Construction features of the sheave together with horsepower capacity and dimension tables are given in Bulletin 20B8524, copies of which can be obtained by using this journal's reader service request card.

(Request Item No. K-9)

### Fafnir Ball Bearings

The Fafnir Bearing Co. has incorporated its Plya-Seals in its line of wide inner ring ball bearings. Thoroughly tested, the Plya-Seal type wide inner ring ball bearings have reportedly demonstrated exceptional ability to seal out excessive amounts of contaminants at slow to moderate speeds, while effectively retaining the bearing's supply of grease.

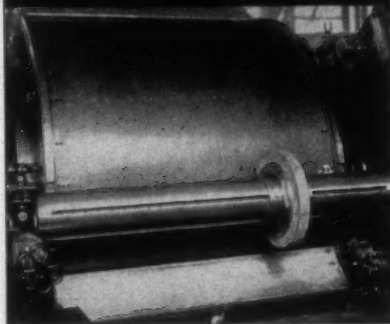
The Plya-Seal consists of 2 "dished" steel plates, between which is sandwiched a synthetic, rubber-impregnated, fabric sealing washer. Both steel plates are fixed securely in an outer ring groove, and the inner plate provides a rigid backing for the seal washer and a close-clearance baffle for retention of grease. The outer plate is slightly shorter to permit the seal washer to flare out in wiper fashion, insuring a tight contact between the inner ring outside diameter and the sealing washer at all times.

Dimensionally interchangeable with the Fafnir Mechani-Seal type wide inner ring

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Stop throwing away profits by dismantling and shipping rolls out for grinding.

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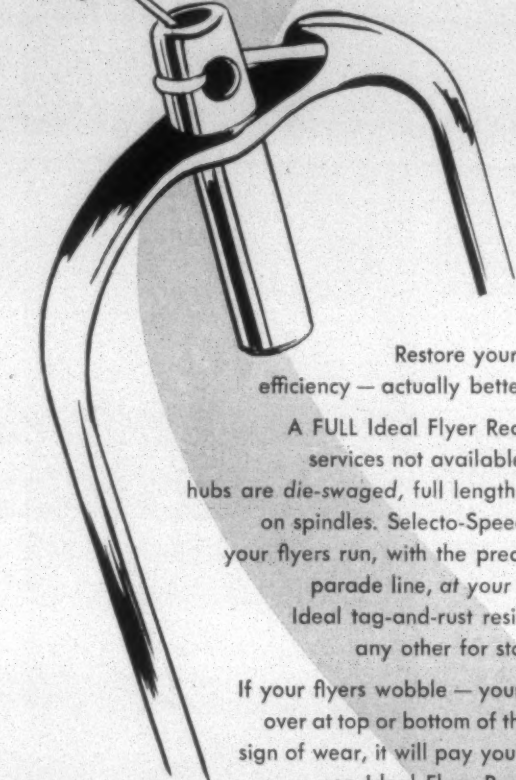
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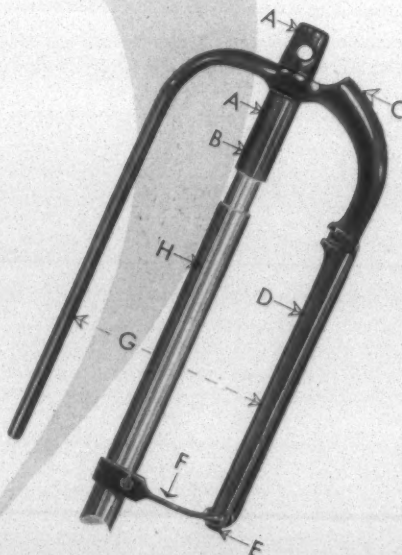
Restore your flyers to new performance efficiency — actually better than new in some respects.

A FULL Ideal Flyer Reconditioning\*\* job includes services not available anywhere else. Barrel hubs are die-swaged, full length. All flyers sit at same height on spindles. Selecto-Speed\* Balancing makes all of your flyers run, with the precision of a West Point Cadet parade line, at your operating speeds. The Ideal tag-and-rust resistant finish is superior to any other for stopping slubs and tags.

If your flyers wobble — your roving jerks — ends run over at top or bottom of the bobbin — or show any other sign of wear, it will pay you to get full information on Ideal Flyer Reconditioning Service.

\*\*Ideal offers partial services — comparable to those available elsewhere — starting at 48c.

- A Realigned
- B Die-swaged full length
- C Slots regauged
- D Hollow leg repaired
- E Ends rebuilt and refinished
- F Pressers blocked
- G Flyers blocked
- H Rebuilt or replaced



\*Patented

**Ideal Machine Shops, Inc., Bessemer City, N. C.**

**Continuous Service to Textile Mills Since 1925**

## FOR THE TEXTILE INDUSTRY'S USE—

ball bearings, and equipped with the Fafnir-originated self-locking collar, the new bearing is available either in the relubricatable or non-relubricatable type. They are also incorporated in the Fafnir line of power transmission units.

(Request Item No. K-10)

## Dayton Finishing Roll

Mechanical products for use in all phases of textile manufacture now are being supplied by the Dayton Rubber Co. The company's line of rubber-covered mechanical goods for the textile field was extended recently with introduction of a custom-engineered dyeing and finishing roll. Available in any diameter or length, the rolls can be made to meet almost any weight, size or pressure requirements. Other Dayton textile items include spinning cots, slasher rolls, check straps and pickers.

(Request Item No. K-11)

## Duracron Enamel Finishes

A new type of coating which reportedly looks and performs more like porcelain than any other known organic finish has been developed by the Pittsburgh Plate Glass Co. To be known as Duracron, the new family of coatings is based on an entirely new and unique series of thermosetting acrylic resins which comprise a basically new chemical composition, the company points out.

The product possesses exceptional adhesion to various metal surfaces and primers, and for many applications the product is said to offer in 1 coat the same protection and perfection of finish as present two-coat finishing systems provide. It will be furnished in a complete range of colors, with prices slightly higher per gallon than for ordinary baking enamels. Cost will be lower for many applications, the company points out, since only a single coat will be needed.

Although exterior field tests have been underway for some time and initial reports show excellent weathering properties, no conclusive findings have been announced on possible applications of Duracron for building panels.

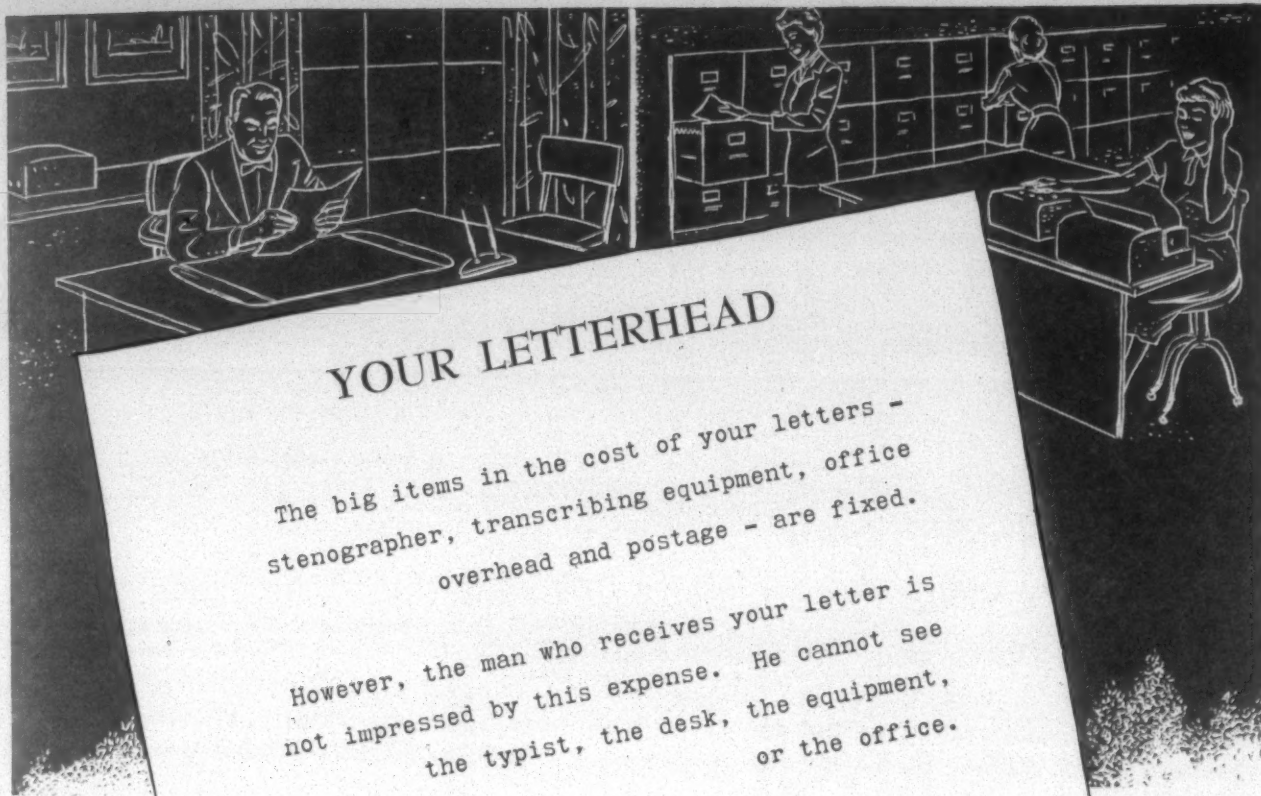
(Request Item No. K-12)

## Corrosion-Resisting Grease

A new line of acid and alkali-resistant greases for problem applications in the textile industry is announced by Keystone Lubricating Co. Known as the Keystone 5P line, these specialized lubricants are said to provide effective protection against more than 100 corrosive agents and solvents. In addition, they prevent leakage, preserve packings, protect equipment and floors, and lower operating and maintenance costs. Users report savings as high as 50 per cent in comparison with conventional general-purpose lubricants, Keystone states.

The line consists of 3 types (5P7, 5P8, 5P9) covering a wide range of operating temperatures (from 0 to 350° F.). They have a smooth, non-fibrous body, are pale





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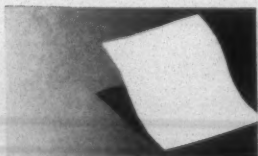
However, the man who receives your letter is not impressed by this expense. He cannot see the typist, the desk, the equipment, or the office.

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THE PAPER IS OF MAJOR IMPORTANCE  
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amber to light cream in color, are made in 4 consistencies (heavy, medium, light and X-light) and have an A.S.T.M. penetration range of from 200 to 350. The line is available in 1-lb. and 7-lb. cans, 25-lb. pails, 100-lb. kegs and 400-lb. drums. Cases contain 12 1-lb. cans or six 7-lb. cans.

(Request Item No. K-13)

#### Lift Truck Attachment

The Yale & Towne Mfg. Co. has announced the development of a heavy-duty, dual purpose, rotating lift truck attachment

which will permit the truck to double as a standard fork truck and bale handler. Versatility of the attachment permits the handling of 2 dissimilar loads with the same truck, Yale points out, thereby providing for maximum utilization of a single piece of equipment. The attachment uses 2 sets of hydraulically controlled, 8" wide forks mounted on opposite sides of the fork carriage for clamping surfaces. Used as a clamp, it can securely pick up, lift and carry bales varying from 27" to 75" in width. The 360 degree rotating characteristic of the fork carriage permits either horizontal or vertical placement of the load. With the upper set of clamping arms extended out of the way the attachment can be used to handle pallet loads up to 75" in height. Either set

of forks can be used to carry pallets merely by 180 degree rotation of the attachment. On a 5,000-lb. capacity truck, the new Yale fork-clamp can handle loads up to 3,200 lbs. at a 24" load center.

(Request Item No. K-14)

#### Oakite Liquid Detergent

Development of a new concentrated liquid detergent, called Oakite Liqui-Det, has been announced by Oakite Products Inc., manufacturer of industrial and sanitizing materials. The new detergent, which contains no soap, is said to go into solution instantly and to develop copious suds, in hard or soft water, hot or cold, and then to penetrate and loosen the most common soils in a very short time. Furthermore, the company states, it can be used repeatedly without rinsing, and without causing any build-up of film or discoloration. It is safe on every type of surface and pleasant to the hands. As for economy, concentrations as low as 1/4 ounce to the gallon of water are being used with excellent results.

(Request Item No. K-15)

#### Powerflex V-Belts

The Thermoid Co. has introduced a new Powerflex high-capacity V-belt designed for applications where increased power transmission is desired with a minimum of maintenance. The new belt is available in all standard sizes and features a special oil-resistant cover to prolong belt life. With up to 40% more strength than standard belts, the Powerflex reduces belt failure, the manufacturer points out. Lower drive costs can be achieved since fewer belts and narrower sheaves are required to handle a load. One drive formerly using 13 standard belts was redesigned to use only 9 of the Powerflex belts. Bearing life is increased because of lighter weight and lower stresses. The belts can be furnished with static conducting covers. A and B section belts are manufactured with nylon laminated construction and C, D and E sections are of heavy rayon grommet construction.

(Request Item No. K-16)

#### All-Purpose Grease

The Bardahl Oil Co. has developed a new type of all-purpose grease that is said to be highly adhesive to metal, and practically immune to extremely high and low operating temperatures. Another outstanding feature is said to be its ability to hold up in shrinking units which operate under high temperature, live steam pressure and water present conditions.

(Request Item No. K-17)

#### Cheese Spring Tubes And Spring Cake Carriers

R. & J. Textile Corp., sole distributor in this country and Canada for Lebrecht Tigges K.G. of Wuppertal-Cronenberg, Germany, is now offering that firm's cheese spring tubes and spring cake carriers. According to

## NON-FLUID OIL

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# GIVES MORE PERFECT TWIST

However applied—NON-FLUID OIL lubricates constantly and dependably, insuring longest life for rings and travelers. NON-FLUID OIL stays on rings and off rails, giving less "black" yarn and fewer broken ends—which means increased production of perfect twist.

7 out of 10 textile mills use NON-FLUID OIL for ring lubrication and find it "tops." It is especially suitable for centralized method of application because it does not disintegrate under pressure—so that rings and travelers are supplied throughout the entire doff with a film of highest quality lubricant.

Send for Bulletin T-16 and sample of NON-FLUID OIL and see for yourself why it is "tops in textiles."

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WORKS: NEWARK, N. J.

So. Dist. Mgr.: Lewis W. Thomson, Jr. Charlotte, N. C.

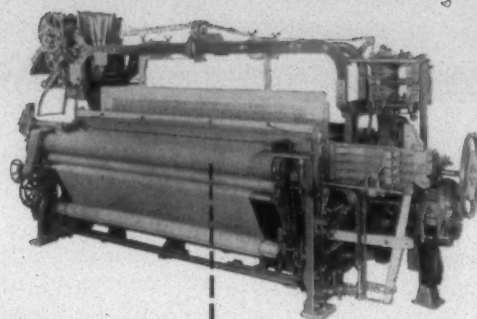
#### WAREHOUSES

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.





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**This take-up roll covering combines  
smoothness and high friction**

Armstrong NO-732 Take-Up Roll Covering reduces fabric marking because it provides a unique combination of smoothness and high friction.

The finely textured surface of NO-732 is smooth enough to handle even the finest loom-finished fabrics safely . . . and yet this synthetic rubber compound has up to twice the surface friction you'd normally expect of a rubber material. This high friction provides steady take-up tension from selvage to selvage, which practically eliminates any chance of wrinkling. And NO-732 Covering will give you years of dependable service.

NO-732 is backed with sturdy fabric for extra strength and good adhesion to the roll. It's easy to apply, too. It comes in lengths of 60, 100, or 150 feet, in handy ribbon form. Uniform thickness is .083 inch. Standard width is 2 inches; other widths are available on request.

Your Armstrong man will be glad to show you samples of NO-732 and help set up a test in your plant. For more information on NO-732, and other weave room items, send for our new folder, "Armstrong Loom Supplies." Write Armstrong Cork Company, Industrial Division, 6911 Davis Avenue, Lancaster, Pennsylvania.

**Armstrong LOOM SUPPLIES**

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## FOR THE TEXTILE INDUSTRY'S USE—

literature by the manufacturer, the spring cake carriers offer the following advantages: (1) favorable influence of the radial action regarding the uniform dyeing, retaining physical properties of the various yarn types; (2) maximum penetration of the dyeing liquor into the cakes; (3) easy stocking and doffing of the cakes by means of a funnel, preventing any waste of yarn; and (4) a shortened dyeing period. The cheese spring tubes, it is said, offer these features: (1) radial spring action; (2) can be bushed out into any form, whether cylindrical or conical; (3) can be wound without stocking either cylindrically or conically; (4) can be used on all existing spindles, whether of

triangular, square or other type; and (5) offers great permeability and small contact area.

(Request Item No. K-18)

## Storage Bins

Open-end steel bins which can be stacked to provide a portable storage section are now available from the Pressed Steel Division of Republic Steel. Made of corrugated steel, the U-shaped bins are accessible from either end for loading or unloading and can be moved and stacked in any available area. The units are handled by fork lift truck, and can be tiered to any convenient height. Bins are made 36" high, 36" wide and 52" deep for handling bolts of cloth, but can be made to any specified dimensions. Corru-

tion gives added strength to the bins; further reinforcement comes from steel tie rods at the front and back which run from side to side. Special foot brackets make for steady and easy tiering.

(Request Item No. K-19)

## Improved Vatrolite

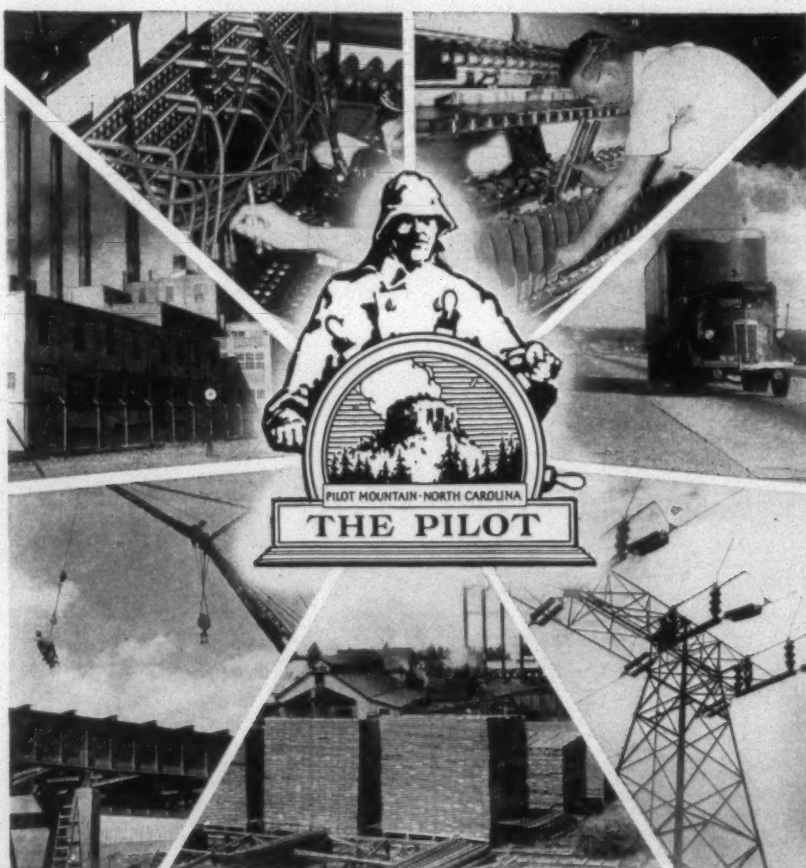
Royce Chemical Co. announces the development of improved Vatrolite, a dustless sodium hydrosulphite, said to be considerably superior to the product formerly manufactured by the firm.

While Vatrolite was developed primarily for vat dyeing, it was pointed out that it is equally effective in stripping colors from cotton, rayon and other cellulosic fabrics. Among the advantages cited by the manufacturer are ease of handling in dry chemical feeding devices and freedom from caking in caustic solutions. These advantages, the company states, are due to the new Vatrolite's carefully controlled composition.

The product is dustless and of more uniform particle size than was the case in the past. Because of this, the company points out, Vatrolite dissolves almost instantly. Therefore, pipe and gutter systems cannot become clogged with undissolved hydrosulphite. A slow decomposition rate makes it possible to maintain vat colors in a reduced state for extended periods of time.

The product is said to be equally effective in pad-steam dyeing, reduced vat dyeing and indigo dyeing. It has been found that addition of a certain amount of Vatrolite to the dyebath in dyeing sulphur colors aids in the prevention of bronzing and pre-oxidized, dark selvages when the dyeing is carried out on the jigger. It is highly effective in stripping direct colors from cotton, linen and rayon. It can also be used for stripping vat and naphthol colors with the aid of Dispersoll, another Royce product.

(Request Item No. K-20)



## The Pilot works with management — building business by protecting workers!

From the telephone switchboard to the textile mill the protective arms of The Pilot cover all phases of Southern industry. Individually tailored group insurance programs stimulate profits and production by improving employee relations, reducing labor turnover, and attracting competent help.

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PILOT TO PROTECTION SINCE 1903 • O. F. STAFFORD, PRESIDENT

## Dust Protected Lift Truck

The Yale & Towne Mfg. Co. has introduced an improved dust-protected, gasoline-powered lift truck to provide trouble-free materials handling in locations containing atmospheric abrasives. There are 5 main features on the truck which materially reduce the harmful effects of abrasive dusts and lint to mechanical and electrical parts, a factor in operation all too often not given proper consideration by lift truck users. Cases on record show that engine life can be increased by as much as 5 times by proper dust protection.

Since abrasives in the air include a diversity of consistencies, a tandem air cleaning system filters air going into the carburetor. Air passes first through an improved dry-type pre-cleaner, then through a heavy-duty oil bath cleaner. The pre-cleaner is mounted on top of the truck hood so that the primary engine air intake is remote from engine air contamination caused by the fan. The oil filter is of a heavy-duty type. A heavy-duty air filter is also provided on the crankcase breather pipe.

The bottom of the truck is protected by a deflector plate which reduces the possibility

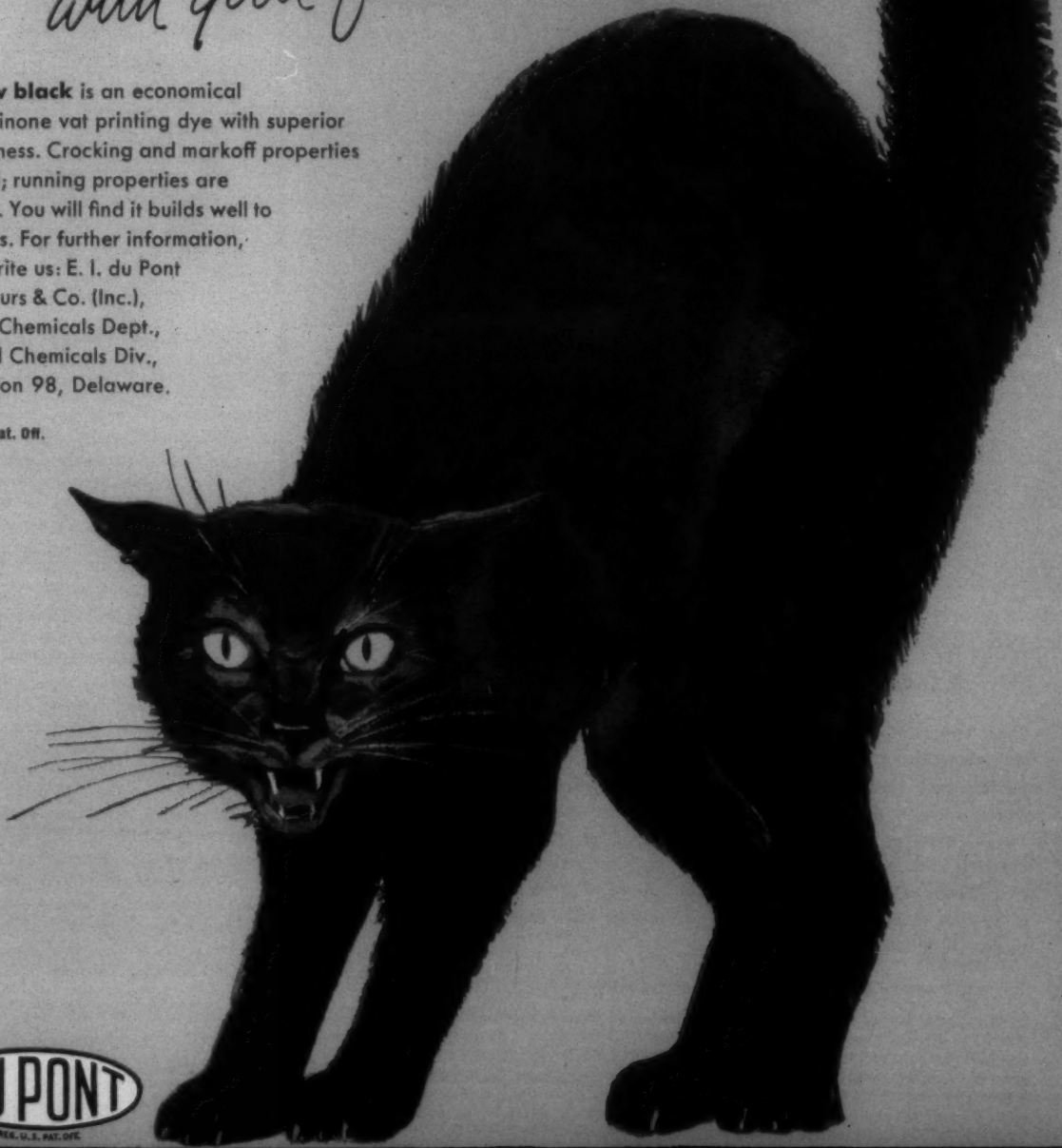


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*- a printing black  
with good fastness properties*

**This new black** is an economical anthraquinone vat printing dye with superior light fastness. Crocking and markoff properties are good; running properties are excellent. You will find it builds well to jet shades. For further information, please write us: E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Dept., Dyes and Chemicals Div., Wilmington 98, Delaware.

\*Reg. U.S. Pat. Off.



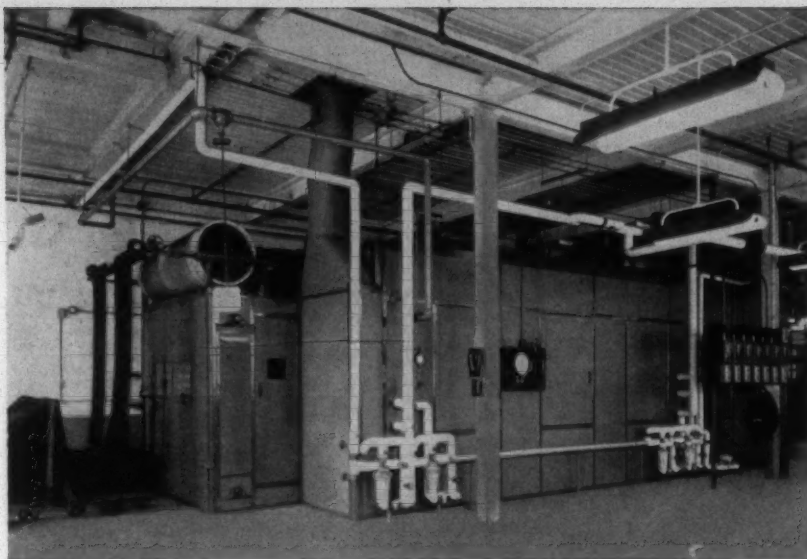
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*Installation view of  
Proctor Loop Curer*

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### LOOP CURER and ROLLER CURER

These rugged, high-capacity machines feature the latest design and construction improvements—all geared to increase your profits. Units can be combined with existing equipment to meet your exact requirements. For fabrics that will not handle properly in loop, the roller curer is recommended. Recent developments for this machine also include improved air distribution, flexibility in holding capacity, and no-stretch operation. These machines are the result of long experience in supplying machinery to the textile industry. For the complete story of the profit-making opportunities offered by Proctor, write today for latest information bulletins.

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### PROCTOR & SCHWARTZ, INC.

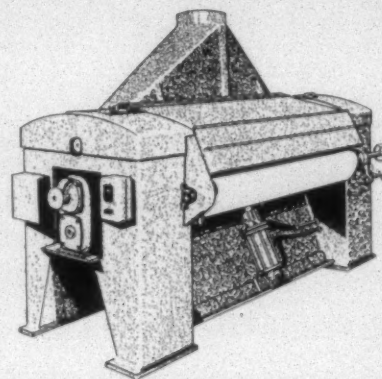
Philadelphia 20, Pa.

Manufacturers of Textile Machinery & Industrial Drying Equipment

#### FOR THE TEXTILE INDUSTRY'S USE—

of foreign particles on the floor from being drawn up into the engine compartment. This deflector plate can be easily removed for truck servicing. Finally, the generator and voltage regulator are completely enclosed for the preservation of commutator surfaces and extended brush and contact life. The protection on these 2 units is the same as that used on Yale trucks recently granted Underwriters' Laboratories Gold Seal approval. (Request Item No. K-21)

### Turbo Finishing Machinery For High Pile Fabrics



**Turbo Electro-Finisher (Turbo Machine Co.)**

Turbo Machine Co. has announced the development of a new machine for the finishing of fur-like high pile fabrics of either knitted or woven construction. Called the Electro-Finisher, the new machine is used to raise the pile of the fabric and impart the fur-like characteristics desired. It consists of an electrically-heated cylinder, controlled by instruments so that a constant preset heat is maintained. The cylinder has special grooves that separate and straighten the fibers and give the fabric a fur-like hand. A pneumatically-controlled endless conveyor brings the cloth in contact with the cylinder at the speed and pressure desired.

The company notes that the machine, while used principally on high pile blends of Orlon and Dynel at present, may also be used with other long hair or pile fabrics such as wool, nylon and rayon by adjusting the temperature of the cylinder and the tension on the conveyor.

In addition to the Electro-Finisher, Turbo has developed two other machines used in high pile finishing—a shearing machine and a wet applicator or swabbing machine. The Turbo shearing machine is used for rough-shearing before the pile is raised and straightened, and also for final shearing. An exclusive feature is a fabric conveyor which can be adjusted for the proper cut. The operator uses a micrometer adjustment located within easy reach on the front of the machine. Depth of cut can be varied from .0010" to 1/2". Blades can be resharpened by reversing the main cylinder and running it against the main bed knife. The machine is complete with motors and blower for suction table.

The Turbo wet applicator dampens the



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#### FOR THE TEXTILE INDUSTRY'S USE—

pile of the fabric at speeds that can be varied from 2 to 20 yards per minute. Brushes can be positioned to control the amount of liquid applied to the pile. Excess liquid drains back into the pan and can be re-used. The pan is easily removable for cleaning or when a different solution is

used. All parts are stainless steel. The wet applicator can be used on materials other than high pile fabrics where a controlled wetting is required. All three Turbo machines are designed to handle fabrics up to 54" in width, at speeds ranging from 2 to 20 yards per minute.

Turbo foresees many uses for high pile fabrics in addition to women's coats where

the demand presently exceeds the supply. Among these uses are linings for jackets, gloves, galoshes, etc.; sweaters, collars for jackets, draperies and bedspreads. Turbo plans to set up a complete finishing department at its plant as a demonstration unit to show what can be achieved with the company's high pile finishing equipment.

(Request Item No. K-22)

## For the Mill Bookshelf

#### Power Sweeping

As a result of recent technical developments, many congested areas formerly swept by hand now can use power sweeping, according to a new booklet available from the G. H. Tennant Co. This 8-page illustrated booklet, titled *Can We Use Mechanized Sweeping Profitably?*, reviews advantages and discusses aisle widths, dust control, possible cost savings and other points. It also includes a check list to pre-determine a sweeper's usefulness, its value for sanitation, safety, housekeeping, etc.

(Request Item No. K-23)

#### Molded Plastics

A new manual on molded plastics for industrial applications has been published by The Richardson Co. The 8-page manual discusses the advantages of molded plastics and gives thumb-nail case histories of 12 different applications. A special section gives a picture-definition of the difference between "thermosetting" and "thermoplastics," plus a series of "right way" and "wrong way" sketches to aid the designer of molded plastic parts. A full-page chart details the properties of 13 different materials, suggesting typical applications for each material, and brief definitions explain the difference between compression molding, transfer molding and injection molding. The manual also suggests some 20 questions, answers to which should be submitted by prospective users of molded parts who wish detailed information on a specific job.

(Request Item No. K-24)

#### Cleaver-Brooks Boilers

A new 4-page Cleaver-Brooks bulletin describing outstanding boiler installations around the world has been issued by Cleaver-Brooks Co. The advantages of the newly-introduced Progress packaged boiler are also described. Designed for commercial heating up to 1,340,000 b.t.u./hr., the new Progress boiler completely packaged design has proved a time-saver for the contractor. Two full days savings in labor have been reported because the contractor does not have to install and wire controls, insert burner or put on jacketing, the bulletin points out. The Progress boiler is fire-tested in the factory and has a guaranteed minimum operating efficiency of 80%. One in-

stallation discussed in the bulletin is that of Newberry (S. C.) Mills, which has reported savings of thousands of dollars, according to Cleaver-Brooks.

(Request Item No. K-25)

#### Cyanoethylation Of Cotton

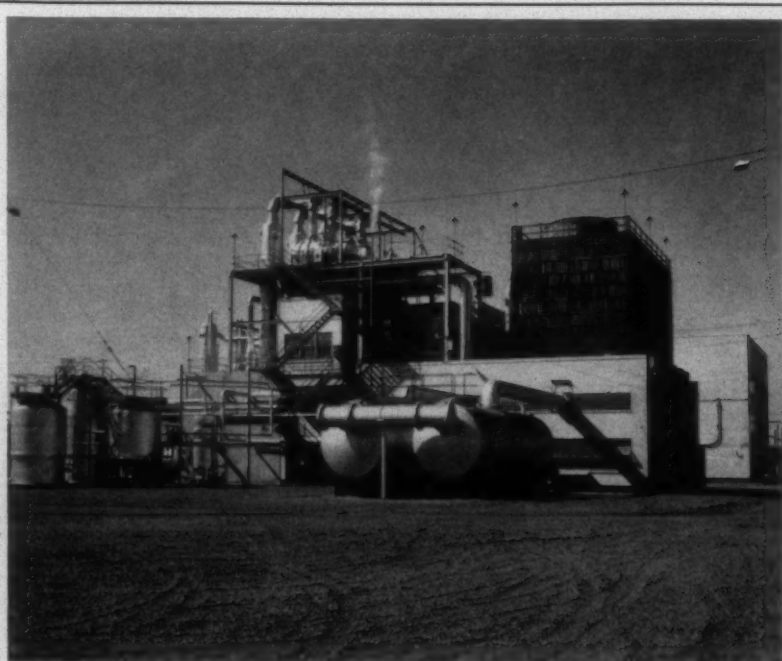
A detailed report on cyanoethylation of cotton which has been jointly prepared and published by the Institute of Textile Technology, Monsanto Chemical Co. and American Cyanamid Co., is now available to all interested parties. The cyanoethylation process is one that converts cotton into a new fiber by use of the chemical, acrylonitrile.

The report, written after several years of basic research on the subject by the participating organizations, discusses procedures of cyanoethylation, economics of the treatment and commercial use based on pilot plant operations. Copies can be obtained by using this journal's postage-free reader service request card.

(Request Item No. K-26)

#### Lift Truck Attachments

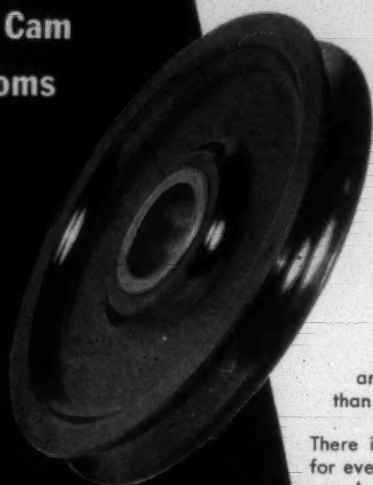
A new 4-page folder illustrating and describing its Cascade load clamp, side shift and rotating attachments for its line of powered lift trucks has been released by The Elwell-Parker Electric Co. The litera-



**NEW HYDROGEN PEROXIDE PLANT**—The Solvay Process Division of Allied Chemical & Dye Corp. recently put into operation its new hydrogen peroxide plant at Syracuse, N. Y. The company has developed a new method of producing hydrogen peroxide which involves a chemical oxidation reaction which Solvay believes to be the most advanced and efficient process ever developed for manufacture of this product. The process was initiated by Allied Chemical's central research laboratory at Morristown, N. J., and perfected on pilot plant scale by a team of chemists and engineers at Solvay's Syracuse research center. Involving catalytic hydrogenation and subsequent oxidation of complex organic materials, the process results in the combining of by-product hydrogen from Solvay's adjacent electrolytic chlorine cells, with oxygen from the air, to produce hydrogen peroxide. Besides its wide use in the textile industry as a bleaching agent, the product is being used more and more by other industries.



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### Self-Lubricating:

no oil to drip, gum or freeze

### Stronger:

won't chip or break in ordinary use.

### Smoother:

reduce cord or strap wear, and won't pick up lint or fly.

### Swaged Bearings:

won't loosen or wobble . . . and will last many times longer than ordinary sheaves.

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Made by National Plastics, Inc.

**Textile Machinery Co.**

## FOR THE MILL BOOKSHELF

ture covers such equipment as the standard load clamp, the side shift load clamp, the rotating load clamp, the standard clamp with pallet forks, and rotating forks. Seven different load arms are likewise illustrated, together with accompanying text. The folder contains tables showing detailed specifications of the various attachments, and the types prescribed for various models.

(Request Item No. K-27)

### Plasticizers

*Plasticizers* is the title of a 48-page bulletin being offered by Kessler Chemical Co. Inc. Properties and specifications of 15 plasticizers are listed, including methoxyethyl, butoxyethyl, butyl and octyl esters, phthalates, adipates, stearates, olcates and laurates. Performance data with polyvinyl chloride are presented along with recommendations for use with cellulose, resins, polystyrene and synthetic rubber. Extensive charts and graphs are included on solubility, resin compatibility and viscosity-temperature relationships. (Request Item No. K-28)

### Panalarm Annunciator Systems

Now available from the Panalarm Division of Panellit Inc. is a 32-page catalog describing the complete line of standard, integrated Panalarm annunciator systems. The catalog organizes, in 14 sections, the complete story of the Panalarm annunciator system. The first 3 sections discuss company facilities, annunciator function and general features of Panalarm annunciator systems. Section Four illustrates typical industry applications. The following sections present operating sequences, enclosures, mechanical specifications, technical data performance features of specific types of systems. Available remote equipment and components, ordering information and engineering data are included in the remaining sections. (Request Item No. K-29)

### Shuttle Care

The Draper Corp. is offering a new 4-page brochure entitled *Suggestions for the Care of Draper Shuttles*. The literature gives 8 rules for shuttle care, shows graphically the proper method of aligning the shuttle spring, and offers a check list of loom settings that govern shuttle life to a great extent. Copies of the brochure can be obtained by using this magazine's postage-free reader service card.

(Request Item No. K-30)

### High Vacuum Pumps

The recently increased performance ratings of Stokes rotary mechanical vacuum pumps, as well as other useful information on vacuum processing problems, are contained in a new edition of the 28-page catalog on *Stokes Microvac Pumps for High Vacuum*, issued by F. J. Stokes Corp. The catalog includes, in addition to specifications for the complete line of Stokes pumps,

# The Textile Shops

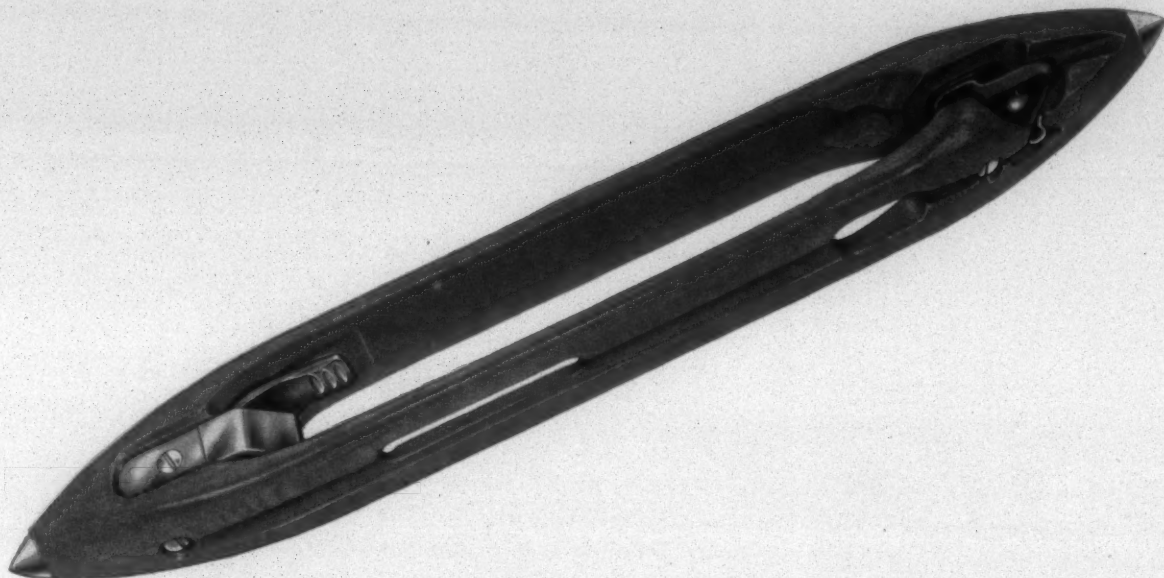
Acid Tanks	Coppersmithing	Picker Screens
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Bleaching Tanks and Tubs	Cylinders	English Wire Cloth
Card Screens	Spinning	Galvanized Wire
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Card Screen Bars and Ribs	Twisting	Quill Cans
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Chemical Tanks	Dye Kettles and Vats (New)	Size Kettles
Condensers	Dry Cans	Tanks
Condenser Screens	New and Repairs	Vee Belt Drives for Dry Cans
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Pipes and Returns	Filters	Special Machines Custom Built
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SPARTANBURG, SOUTH CAROLINA, U. S. A.



# DURAMOLD SHUTTLES

## Last 3 times as long as wood



### DURAMOLD—most versatile and strongest molded plastic shuttles on the market

Rugged Duramold Shuttles are manufactured from a single solid, uniform piece of Westinghouse Micarta, remarkably strong, grainless molded plastic, composed of laminated twill fabric impregnated with a phenolic resin, which provides greatest unidirectional strength.

You will get greatly increased shuttle life and lower maintenance costs when you use Duramold Shuttles because the engineering skill of Southern Shuttles Division has taken this superior material and produced the strongest shuttle ever made.

The method of molding and manufacture of Duramold Shuttles permits much greater versatility of construction, such as tip location, eye location, chamber lengths, shuttle widths, etc.

Vastly improved material strength reduces premature failures, prevents splitting and splintering. In fact, the surface becomes smoother with use, thereby reducing friction.

Denser material allows more positive seating of the shuttle parts, reducing the possibility of loosening and rocking to a minimum.

Extension of the tough side wall laminates all the way to the tip greatly increases the strength of this section. Wall sections are thicker for greater strength, and the corners at both ends of the chamber are reinforced. Macerated end blocks are molded into the shuttle to provide flexibility for absorbing shock at these points.

Take advantage of the tremendous savings possible in your weaving room costs with Duramold Shuttles.

Other Plants and Offices: Granby, Quebec, Canada—Lawrence, Mass.—Greensboro, N.C.—Atlanta, Ga.—Textile Supply Co., Dallas, Texas—Albert R. Breen, Chicago, Ill.

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STEEL HEDDLE MFG. CO.  
PHILADELPHIA 32, PA.  
SOUTHERN SHUTTLE DIV.  
GREENVILLE, S.C.  
Southern



World's largest manufacturer of all type Shuttles

Comparison made them famous





"You'll get more production at the lowest possible cost when you standardize on G&K Textile Leathers."



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**G & K**  
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"If it's leather belting, cements or dressings, buy G&K products with assurance."



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**G & K**  
INDUSTRIAL  
LEATHERS

**GRATON & KNIGHT**  
Company  
WORCESTER, MASSACHUSETTS

#### FOR THE MILL BOOKSHELF

tables of formulas, constants and conversion factors frequently used in vacuum processing; solutions to problems of pump selection for typical vacuum systems; and useful information on continuous oil purification and other maintenance procedures for high vacuum pumps. Installations of Stokes Microvac pumps, many of which are illustrated in the new catalog, include high vacuum impregnation of textiles. Copies can be obtained free by using this journal's postage-free reader service request card.

(Request Item No. K-31)

#### 3M Pressure-Sensitive Tapes

A new 19-page manual describing pressure-sensitive tape applications designed to save time and up production in the textile industry is available from Minnesota Mining and Mfg. Co. The manual illustrates more than 60 different Scotch brand tape applications ranging from increasing the life of loom reeds by applying paper tape to each edge, to the use of tape for permanently pleating fabrics. The manual is broken down to cover 5 manufacturing phases including production of yarn, cloth, garments and apparel, carpets and rugs and cloth finishing. Also covered are tape applications for packaging and product promotion. Other sections of the manual describe physical properties of Scotch brand pressure-sensitive tapes, the various dispensers

for use in the textile industry and the customer service available for 3M's technical departments. One 3M group, the customer engineering service, designs new tape dispensing equipment for established and potential customers when unusual problems exist. Another group, the technical service department, often designs new tape constructions for special customer needs.

(Request Item No. K-32)

#### Humidification Equipment

Abbeon Supply Co. is offering an illustrated 4-page bulletin (No. 492) entitled *A Few Facts About Humidification for Industry*. The literature points out what humidification is, and how important it is to control proper humidification in working and storage areas. Illustrated are the company's hydrolid direct reader, the pocket sling psychrometer and several models of Walton humidifiers. Prices are given for all equipment listed. (Request Item No. K-33)

#### Wool Cleaning Unit

Proctor & Schwartz Inc. has announced the publication of Bulletin No. 422 on its wool cleaning unit for cleaning carpet wools mechanically before scouring. Component machines include a heavy-duty No. 490 bale breaker feed with a long blending apron; a No. 512 super picker; a No. 510 willow; and a new No. 683 ceiling suction condenser, single drum type. According to the lit-

## 5 BIG REASONS for using PENFORD GUMS in your WARP SIZING OPERATIONS

1. The clarity of the Penford Gum films provides a minimum of masking on colored warps for fabrics which are not desized in finishing.
2. The strong flexible films of Penford Gums provide improved abrasion resistance insuring maximum weaving efficiency.
3. The unusually strong adhesion of Penford Gum films to natural and synthetic fibers of all types minimizes shedding and eliminates fiber mats at the drop wires and fuzz balls on the yarn.
4. The improved film flexibility of the Penford Gums enables excellent weaving of synthetics and natural fibers at lowered relative humidities.
5. The improved flexibility and adhesions of the Penford Gum films have in some instances reduced the necessity of adding certain sizing adjuncts.

Penick & Ford has a staff of Technical Sales Service Engineers to show you the where, when, and how of using Penford Gums with all types of equipment. (U. S. Patent Nos. 2,516,632; 2,516,633; 2,516,634)

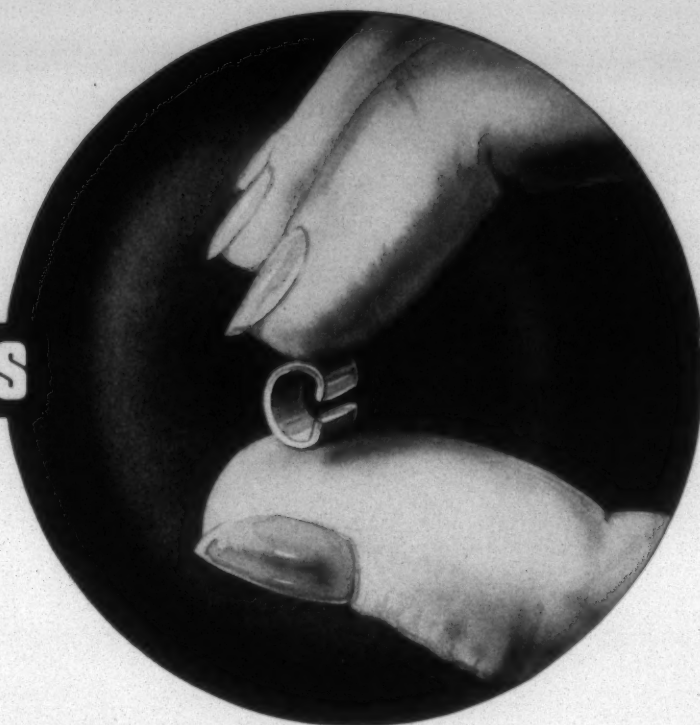
**PENICK & FORD, LTD.**  
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420 LEXINGTON AVE., NEW YORK 17, N.Y.; 1831 MARIETTA BLVD., ATLANTA, GA.;  
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# CARTER TRAVELERS

**ARE  
PRECISION  
MADE....**



**To insure spinning perfection  
(assured through constant testing)**

.....

Yes, Carter Travelers are precision made, and precision tested, by a modern metallurgical laboratory. This guarantees absolute uniformity of weight, temper and shape of Carter Travelers. Precision-matching to expensive rings means money-saving reductions of wear and cuts down time to an absolute minimum.

At every step of manufacturing, these precision travelers are constantly tested to assure maximum spindle speeds, smoother spinning, and more pounds per cone. To increase your production, and cut your costs, insist on Carter Travelers!

## CARTER TRAVELER COMPANY

Division of A. B. CARTER, INC., GASTONIA, N. C.

Manufacturers of The Boyce Weavers Knotter

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D. E. Phillips	2702 Garden Lakes Blvd., Rome, Georgia
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J. R. Richie	1307 Crabapple Lane, Raleigh, N. C.
J. K. Davis	P. O. Box No. 129, Auburn, Ala.
C. E. Herrick	139 Main St., E., Greenwich, R. I.
Oscar S. Lapham	139 Main St., E., Greenwich, R. I.
Hugh Williams & Co.	27 Wellington St., E., Toronto, Ontario, Canada



## FOR THE MILL BOOKSHELF

erature, advantages of the system include: (1) produces an excellent blend; (2) large percentage of the dirt contained in the raw wool eliminated mechanically; (3) makes scouring more effective, producing much brighter stock; (4) improves color of dyed stock; (5) considerable savings of soap and chemicals in scouring; (6) considerable savings in steam in the drying equipment due to the more opened condition of the wool; and (7) production rate depends on type of stock—range from 1,500 to 2,500 lbs./hr. grease weight.

(Request Item No. K-34)

### Parks-Cramer Bulletins

Parks-Cramer Co. has announced publication of the following bulletins: (1) Bulletin No. F15 describing Parks-Cramer traveling room cleaners for card rooms (Types CBR-CTR). (2) Bulletin No. F25 covering the Parks-Cramer roving frame cleaner. (3) Bulletin No. F35 describing Types CTF, CTR and CTS traveling cleaners for spinning rooms. (4) Bulletin No. F45 on Type CTS traveling floor sweeper and lint removal system. (5) Bulletin No. F55 describing SpinSaVac vacuum cleaning equipment for spinning frames, and the SpinSa-Creel open-type creel. (6) Bulletin No. F65 points out important design features of Parks-Cramer traveling loom cleaners, including the new Oscillaire unit. All of the bulletins are illustrated.

(Request Item No. K-35)

### Supr-O-Band, Supr-O-Tape

Benjamin Booth Co. is offering 2 new 4-page pamphlets, one on its Supr-O-Band banding for drives on twisting, roving and spinning frames, and another on its Supr-

O-Tape condenser tape. The literature points out that Supr-O-Band banding offers these important benefits: improved yarn quality, increased production, longer operating life and lower operating costs. The banding, which can be sewed, cemented or fastened by belt hooks and rivets, is available in both regular and heavy-duty constructions. A sample is attached to the pamphlet.

The Supr-O-Tape condenser tape, available in both neoprene for normal conditions and Hy-Car where excess or strong oils are used, is said to offer these advantages: will not stretch, long life, no cracking of the surface, needs no oil, uniform roving, no sagging, holds square edges indefinitely, endless tapes, belt hooks hold tight, easily cleaned and no excess tension required as with leather. A sample is attached to the pamphlet.

(Request Item No. K-36)

### Color Pictures

Davis & Furber Machine Co. is offering 2 new pictures in color of: (1) a set of 84" woolen cards, and (2) a Simplex woolen ring spinning frame. Each picture measures 19" by 10" and is suitable for mounting or framing. On the back of each picture is the following information: (a) floor plan; (b) range of sizes, accessories, supplies and end products; (c) range of speeds and production; and (d) a list of important features. Copies can be obtained by using this journal's reader service card.

(Request Item No. K-37)

### Dyestuff Circulars

General Dyestuff Co. has announced the release of 2 new circulars—G-794 on Indanthrene Grey GG Infra Double Paste and G-795 on Fastosol Blue L6GA.

Indanthrene Grey GG Infra Double Paste

is a new straight anthraquinone-type vat dyestuff manufactured for dyeing greenish-blue greys of generally excellent fastness properties on cellulosic fibers, including especially fastness to light, chlorine and caustic alkali. It is finished by the new Infra process, which yields a paste that is said to be remarkably uniform in excellence of dispersion quality and particularly suitable for pigment padding and for circulation before reduction.

Fastosol Blue L6GA is a straight, direct dyestuff of exceptional economy and level-dyeing properties, which gives fast-to-light, bright greenish blues on cotton and rayon. It is especially recommended for fabrics that are to receive a resin finish and is suitable also for discharge work.

(Request Item No. K-38)

### Textile Quality Control Papers, Vol. III, 1956

(D. S. Hamby, technical editor; Published by the textile division of the American Society for Quality Control; 233 pps.; members, \$2.50; non-members, \$5).

This volume is the 1956 edition of papers pertaining to quality control in the textile industry. Included are 26 papers dealing with quality control and range in scope from fibers to fabric. The publication includes such papers as: "Guaranteed Quality Fabrics," George Bass, Swift Mfg. Co.; "Advertising and Promotion of Guaranteed Quality," William P. Wright Jr., J. Walter Thompson Co.; "Relation of Yarn Uniformity to Fabric Appearance," Louis C. Doggett and E. J. Burnett, Institute of Textile Technology; "Optimum Twist for Yarns," John Duerst, Coats and Clark; "Quality Control in the Textile Manufacturing Process," C. L. Adams, Alabama Polytechnic Institute; "Picker Lap Quality," Dr. Z. Szaloki, Whitin Machine Works; "Fabric Grading," W. L. Clement, Dan River Mills.

## Serving The Textile Industry

### Ideal Industries Announces Expansion

Ideal Industries Inc. of Bessemer City, N. C., has announced that construction is under way on a new addition to its building that will double present manufacturing space. According to Joe Whitehurst, secretary of the firm, the new building will contain some 11,000 sq. ft. of space and will be ready for occupancy about the middle of December. The addition is the company's second in the past five years.

### American Blower Corp. Marks 75th Anniversary

The American Blower Corp., Dearborn, Mich., manufacturer of ventilators, fans,

humidifiers and air conditioners, is currently marking its 75th year. The company was founded in 1881, and got its start making discharge fans designed to remove sawdust and shavings from the cutting area of saw mills. Other applications of the same principle followed, and in the ensuing years the firm branched out into all types of ventilating equipment. Today the company has its largest plant in Dearborn, with others at Columbus, Ohio, and San Leandro, Calif.

### Calco Chemical Building New Research Facilities

The Calco Chemical Division of American Cyanamid Co. is constructing a new chemical plant at Bound Brook, N. J., designed to house all research activities relat-

ing to both the pigments and the organic chemicals division of Cyanamid. The new facilities will accommodate some 100 research scientists, and one of the specific research projects at the center will be in the field of textile resins. The plant is expected to be completed by next May.

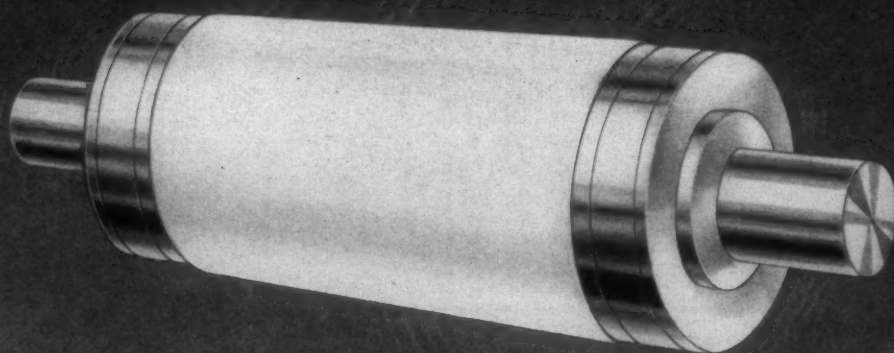
### American Pulley Acquires Materials Handling Line

The Market Forge Co. of Everett, Mass., has sold its materials handling division to The American Pulley Co. of Philadelphia, Pa. American Pulley, a major producer in the field of materials handling equipment, will manufacture its newly-acquired Market Forge line in its recently expanded plant in Philadelphia. According to Market Forge, it



# **"HOLYOKE"**

## **CALENDER ROLLS**



# **HOLYOKE MACHINE COMPANY**

**CALENDER ROLLS for the PAPER and TEXTILE INDUSTRIES  
WATER FILTRATION EQUIPMENT  
HOLYOKE, MASSACHUSETTS**



## FRICTION?

BEAT THE HEAT  
WITH THESE  
SPECIALIZED

## G-C LUBRICANTS



BEN-BOY LUBRICANT is unsurpassed for dryers, calenders, slashers, printing machines, dye house lubrication, pre-boarders, kilns, etc.



G-C NON-MELTING OILS have proven their worth for top rolls, comb boxes, looms and motors.

### GEARCO "A" & "W"

New semi-fluid lubricants for Gears and Cams. Reports from the field and repeat orders indicate that "Gearco A" & "W" are doing a fine job. It may be the answer to YOUR problem.

Write, wire or phone

GEORGIA-CAROLINA OIL COMPANY  
Box 101  Phone 2-1428  
MACON GEORGIA

### SERVING THE TEXTILE INDUSTRY—

sold the division so that it could concentrate its full plant and facilities to its other divisions. The firm manufactures commercial food service equipment, commercial refrigerator equipment, hospital equipment and automotive accessories. Nathaniel Warsaw, who is responsible for the development of the Market Forge materials handling line, has joined American Pulley as manager of the materials handling division.

### Jacquard Servicing Firm Opens Charlotte Branch

The Baxter Corp. of Paterson, N. J., and Grover, N. C., specializing in services to the jacquard weaving industry, has opened a new branch plant at 3018 Bank St., Charlotte, N. C. The new plant is completely equipped for jacquard card cutting and repeating, and is under the supervision of James D. Hutton. Irving S. Baxter is president of the corporation.

### Shawinigan Resins Corp. Opens Atlanta Sales Office

Shawinigan Resins Corp. has announced the establishment of a Southern district sales office in Atlanta, Ga. The new office, located at 1401 Peachtree St. N.E., will enable the firm to give more intensive coverage of the Southeast. Heading the new office is W. F. Hill, who recently joined Shawinigan after being with the plastics division of Monsanto Chemical Co.

### Chicago Machine Lab. Inc. Moves Into New Plant

Chicago Machinery Laboratory Inc., an affiliate of the Miehe-Dexter organization, manufacturer of equipment for punching, scoring, waxing and identifying cones and bobbins, has moved into its new plant at 6200 W. 60th St., Chicago, Ill.

### Fletcher Works Forms New Engineering Section

The Fletcher Works, Philadelphia, Pa., has formed a research and development section to provide consultation service to users of Fletcher winders, twistors and centrifugals. Fletcher's consulting engineers will be available for consultation within 24 hours after a request, Edward T. Taws, president of the firm, reports. The new section will service the firm's centrifugal division, narrow fabrics division, yarn throwing division and the general sales department. Most of the engineers will operate out of the Philadelphia Fletcher plant. An engineering office has been established in Charlotte, and two additional Southern offices are planned.

### Four Firms Name Ralph Gossett Southern Agent

Ralph Gossett & Co., Greenville, S. C., manufacturers' representative, has been appointed exclusive Southern agent for four firms manufacturing supplies and machinery for the textile industry. Representing the

Cosa Corp. of New York City, Gossett is handling all types of machinery for mills and finishing plants, as well as cotton, woolen and synthetic spindles, tape tension pulleys and roller bearing inserts. For M. J. McHale Co. Inc., Scranton, Pa., it is offering all types of flyers, nylon bearings and ferrules, blocks, faller wires and other specialties of the throwing industry. It is handling all types of refinishing and repairing machinery for the John W. Collier Co. Inc. of Providence, R. I., as well as the refinishing of spinning rings, spindles, flyers, tubes and caps. For Standard Card Clothing Co. of Stafford Springs, Conn., it is handling all types of card clothing for cotton, woolen and synthetics.

### Copeland Transfers Sales Yarn Office To Atlanta

Copeland Brothers and Co. has announced that it has moved the general offices of its sales yarn division from Griffin, Ga., to 333 Candler Bldg., Atlanta, Ga., telephone Jackson 3-2951. The change will not affect operations of the sales yarn division, the company points out, and an office will still be maintained in Griffin.

### Production To Be Increased At Chemstrand Nylon Plant

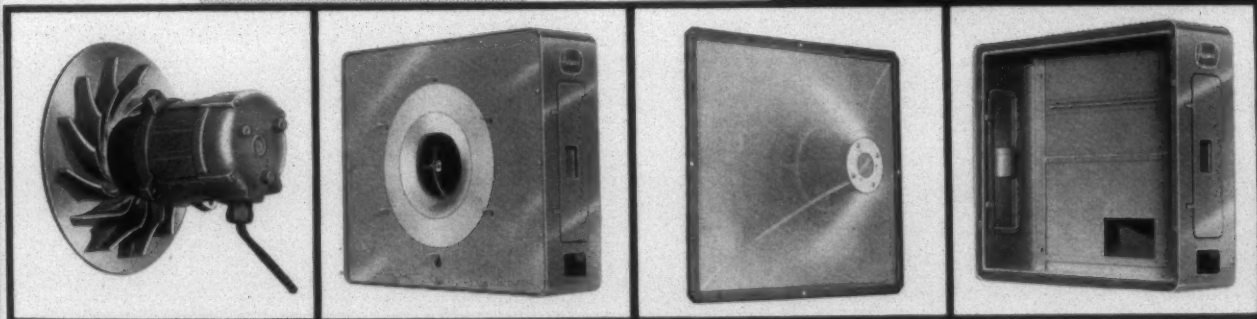
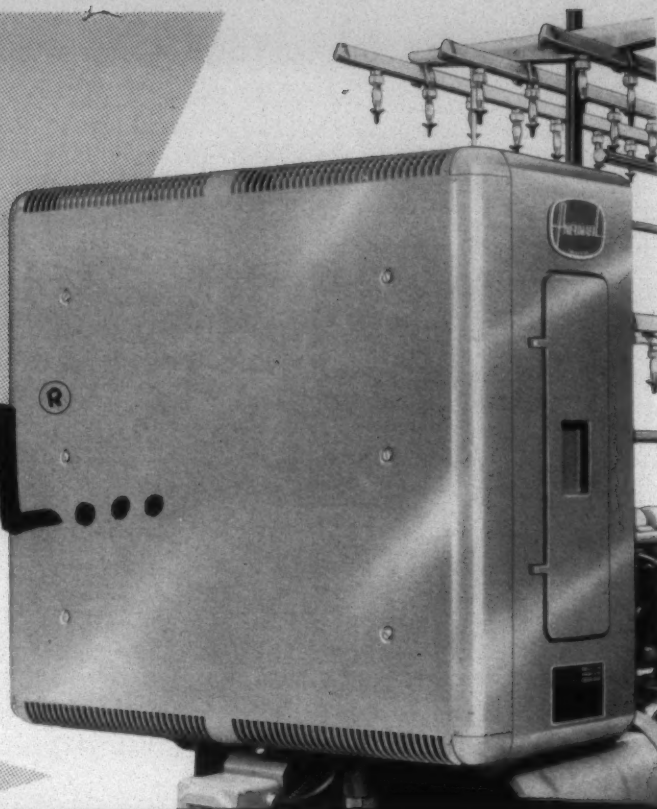
The Chemstrand Corp. has announced that it is again increasing production capacity at its Pensacola, Fla., nylon plant, this time to 114 million pounds per year. According to Chemstrand President E. A. O'Neal, the new facilities are scheduled for completion by the second quarter of 1958. The increased capacity is scheduled to come into production at an 88 million pounds-per-year rate in November 1957, and 100 million pounds per year in January 1958. The original plant was designed for a rated capacity of 50 million pounds a year and production operations started in December 1953. The added capacity is planned "primarily to meet the growing demand for nylon yarn in tire cord and industrial uses," Mr. O'Neal said. The Pensacola plant, the world's largest wholly integrated nylon plant and the first of its type to be built in the U. S., currently employs some 4,500 persons.

### Ground Broken For New American Aniline Facility

Ground has been broken for the new Paterson, N. J., laboratory and warehouse of American Aniline Products Inc., a subsidiary of Koppers Co. Inc., Pittsburgh, Pa. The new facilities, expected to be ready for occupancy by next Spring, will have some 50,000 sq. ft. of floor space, of which 6,000 sq. ft. will be devoted entirely to the up-to-date laboratory facilities. The new laboratory will have scientific apparatus which will enable American Aniline to give technical assistance to all known phases of textile wet processing. American Aniline personnel directly concerned with the new building include Robert W. Brewer of Wyckoff, N. J., district manager; Karl C. Ruppenthal, in charge of application research; and H. P. Baumann of Paterson, N. J., who will supervise the laboratory.



# WHY IS PNEUMAFIL...



**... the most efficient material collecting system in the world?**

Because it provides positive end pick up PLUS higher air quantity for better cleaning.

**... collection capacity greater?**

Because less frequent fiber removal cuts mill costs. The conical screen (originated by Pneumafil) makes this possible.

**... equipped with a turbo fan with involute rotor blades?**

Because this fan (developed by Pneumafil) is self-cleaning and therefore always runs perfectly true with virtually no bearing wear.

**... equipped with flush doors and cast in handles?**

Because mills reported loss time accidents caused by the old type protruding handles.

**... made with four different air discharge covers?**

Because spinning frame motor heat varies in every mill and it is important to dissipate this heat evenly.

Why is Pneumafil designed the way it is? Because YOU, Mr. Mill Man, designed it to do the very best job possible in your mill. Yes, your suggestions have been "built in" to our latest and most modern equipment.

There IS a difference . . . and your valuable ideas make that difference!

PNEUMAFIL CORPORATION  
CHARLOTTE 8, NORTH CAROLINA  
Atlanta, Georgia      Needham Heights, Mass.



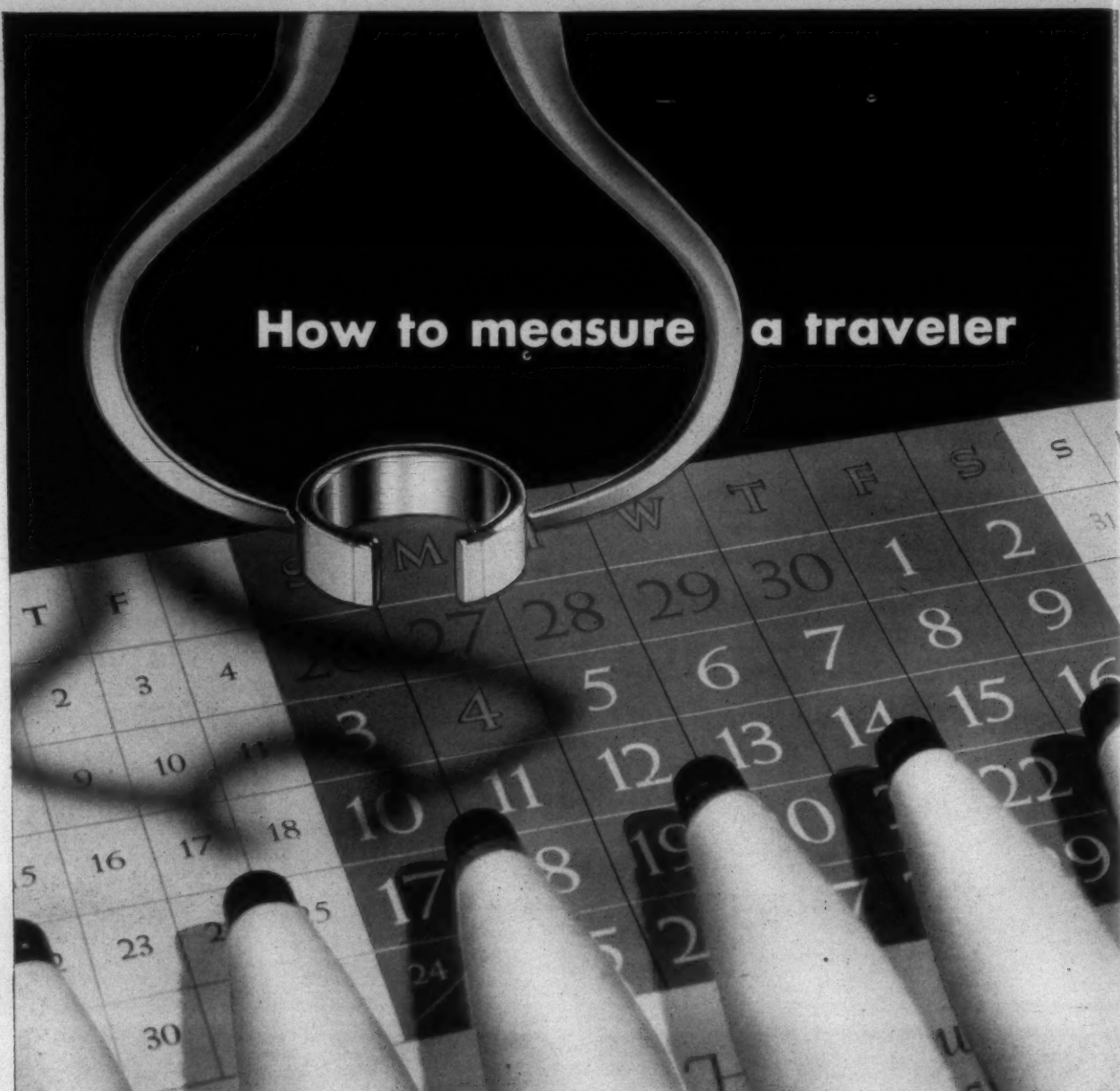
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## How to measure a traveler

Measure a traveler by days of trouble-free service, and by pounds of first-quality yarn delivered. Travelers vary widely by this test, even though they look alike and meet dimensional specifications.

Under any conditions, you can be sure of maximum production per traveler when you rely on Victor experience and quality control.

That's the reason why Victor Travelers are chosen for over 12,000,000 spindles. Mill men everywhere find that Victor quality pays off, consistently, in longer traveler life . . . with fewer ends down . . . at higher spinning and twisting speeds.

A Victor Service Engineer will help you select Travelers that

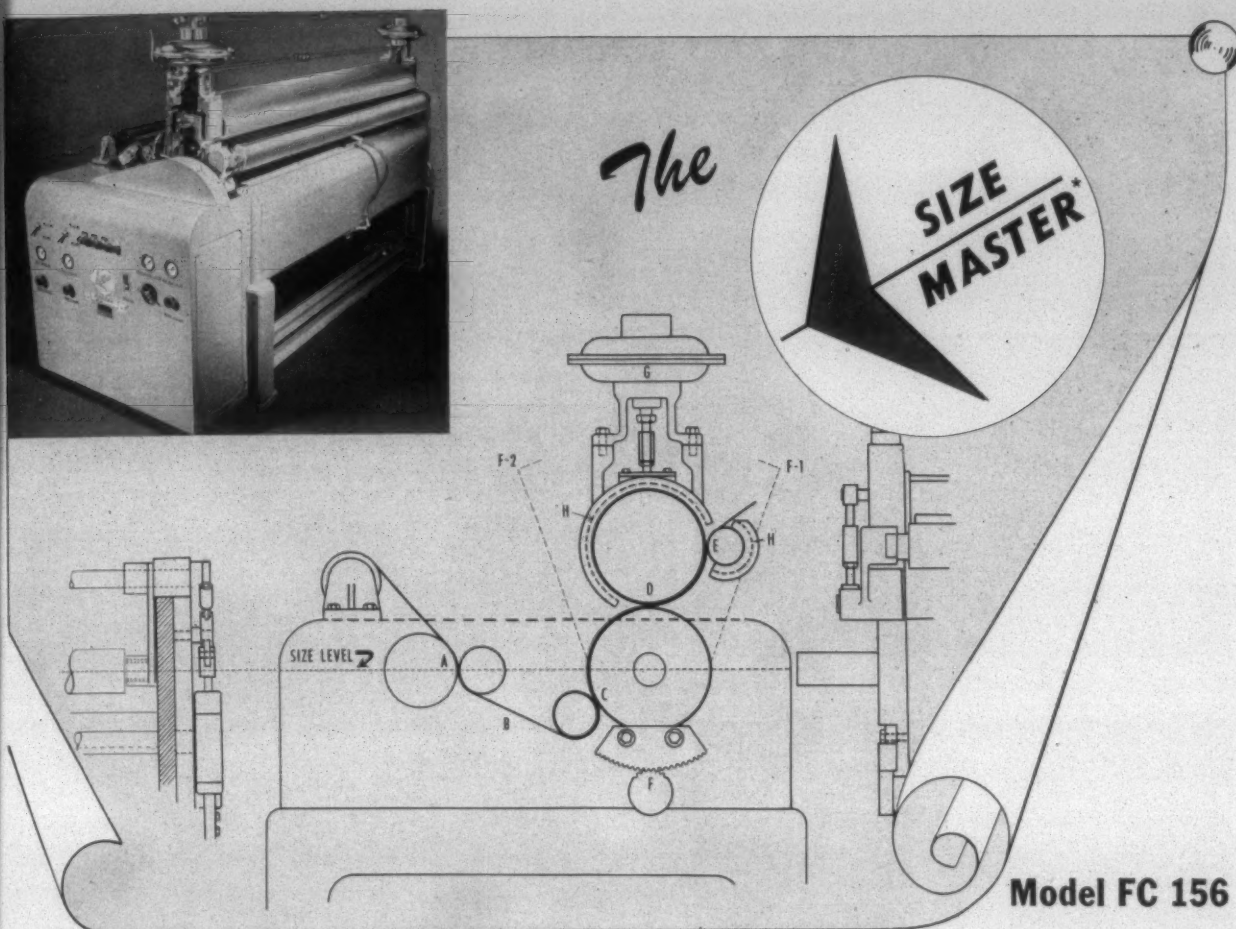
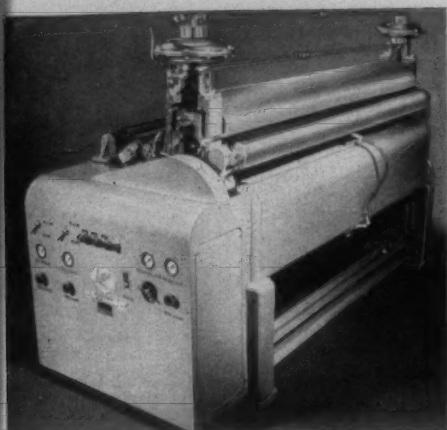
measure up to maximum production on any yarn you are running. Write, wire, or phone for prompt service.



### VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . 20 Mathewson Street . . . . . Tel. DExter 1-0737  
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## ... a new concept in sizing

The New Cocker Size Master is not just an improved size box, but a new concept in controlled penetration and coating warp yarns. It embodies principles never before employed in sizing equipment which give greater flexibility and more even penetration. Its action is shown in the drawing above.

- a. Air trapped between fibres is squeezed out immediately before yarn enters size.
- b. Just as a sponge which is squeezed before immersion will absorb more water more easily and completely, the yarn will absorb more size.
- c. Size is padded in the usual manner, as well as under the solution.
- d. Excess size is squeezed out.
- e. Rubber covered dresser roll removes the size left on the side which was in contact with the lower stainless steel roll.

### Auto-Positioner Roll

This tremendously valuable device automatically compensates for changes in speed by synchronized changes in position and pressure of the top rolls.

- f. Speed compensating rocker action automatically swings to position f-1 at crawl, when size pick-up is low — thus allowing yarn more travel before excess is removed. As speed increases the unit moves to f-2, decreasing travel and removing more excess size.

- g. Roll pressure is synchronized with this compensating rocker action. It decreases at low speeds — increases at high.

- h. **THE EQUILIBRATOR\*\*** This greatly reduces lapping and napping. On ordinary equipment the top and dresser roll temperatures are usually about 18° lower than those in the size box, thus permitting some hardening of the size. Steam jackets on the EQUILIBRATOR automatically moisten and maintain temperatures on the rubber finishing rolls.

The Cocker Size Master can be operated with dry nip if desired. It has been running in test mills for over three months with perfect results and *without a single lap-up*. Capacity approximately 20 gal. Write for full information on this revolutionary equipment today.



Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE  
WARP PREPARATORY EQUIPMENT

\*Reg. Trade Mark

\*\*Patented



## Automatic Winders for Rewound Filling

to take advantage of large package spinning, more yarn on filling bobbins, more uniform bunches, better weaving bobbins, and inspected yarn, all of which go to make a better fabric.

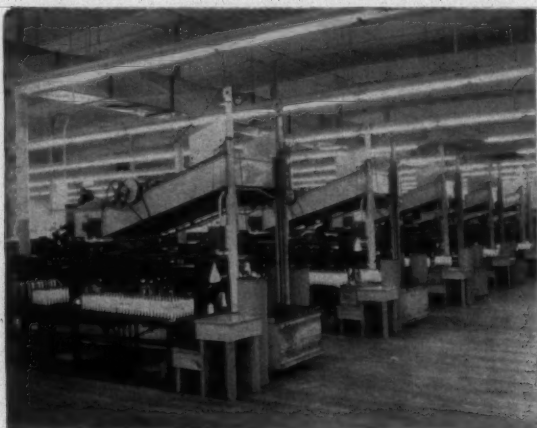


### Abbott Traveling Spindle Package Winders

Automatic Cone or Tube Winders for warping, dyeing, twisting, quilling, sales.

Can be equipped with any one of a variety of slub catchers and inspection devices.

Production up to 1000 bobbins per hour per operator.

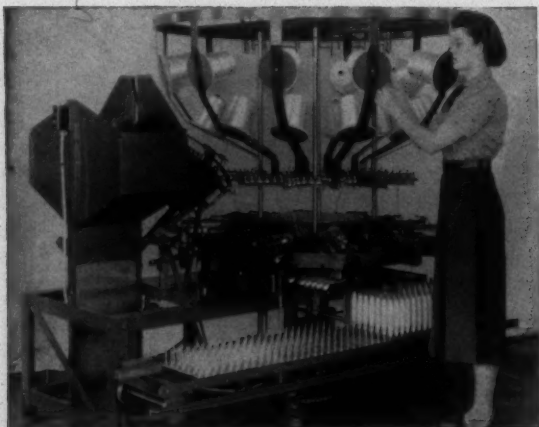


### Abbott Traveling Spindle Automatic Quillers

For winding cotton, spun rayon, worsted, etc., equipped to doff automatically into baskets, or stack automatically into boxes.

For rewinding woolen yarn from mule and ring frames.

For winding filament rayon and nylon, etc., with automatic pinboard attachment or wide belt inspection conveyor.



### Abbott Fully Automatic Radial Quiller

For smaller lots and widely diversified mills.

For winding cotton, spun rayon, filament rayon, worsted, wool, etc.

Can be arranged to deliver bobbins to Pinboard Attachment, or into baskets, or into wide belt conveyor.

One operator can run several machines producing up to 2000 bobbins per hour per operator.

Can be equipped with measured yardage device for two-shuttle looms.

# ABBOTT MACHINE CO., INC.

WILTON, NEW HAMPSHIRE

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# textile bulletin

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, \$1.50; three years payable in advance, \$3.00;

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## Darlington — A Dilemma of Labor Bosses' Own Making

Can the National Labor Relations Board stop a manufacturer who decides to liquidate a mill soon after the employees have voted for union representation? Can it do this regardless of uncertainty as to how much of a factor, if any, unionization, on top of a barely-break-even or non-profitable operation, might have been in the stockholders' decision that they could do better simply by investment of their money in bonds?

Such would seem, theoretically at least, the crux of the unusual situation which has developed in the wake of management's decision to close down the Darlington (S. C.) Mfg. Co., and to put the plant and its physical assets on the auction block Dec. 12-13.

It is not, of course, our purpose here to attempt to forecast what the National Labor Relations Board or any other government agency is going to do, or to seek to do.

The situation, however, certainly for the time being, may be an unhappy one for the town of Darlington and the 500 former employees of the 73-year-old cotton mill. Yet there would seem a strong likelihood that some comparable industrial operation will consider the opportunity afforded by the public auction. And it might decide, after weighing the various potentialities, to locate a manufacturing enterprise in the Darlington County seat.

Such an eventuality certainly is not ruled out, and the picture or the potential picture at this stage is hardly as black as certain elements would have the public believe. Especially is this true in the light of the fact that for a considerable number of years now the industrial growth of South Carolina in particular and the Southeast in general has been fairly phenomenal. This is largely due to a healthy industrial climate and the general public's and local government's attitude of playing fair with industry and giving it at least an equal break.

Therefore, it is not beyond the realm of possibility or likelihood that some industry desiring a site in the area will accept an auction bargain and go into Darlington, willing to gamble on the premise that *genus homo*, sometimes though not always, benefits from the lesson of experience.

Yet it must be admitted that it taxes the imagination to conceive of a method, or even a precedent, by which an agency of the government can compel or demand that stockholders leave their investment in an operation which they believe to be unsound, especially when the shutdown and liquidation process is already under way.

Again, we are not attempting to look into the crystal ball and try to predict what the National Labor Relations Board may do or seek to do in the rather unusual Darlington case. We are simply presenting, and to a degree seeking to analyze, the circumstances as they exist and as they have come about.

The Textile Workers Union of America has been and is doing everything humanly possible to make a sort of *cause celebre* of the Darlington situation. It would be indeed a reversal of the tactics and practice of labor union leaders if they do not continue to try to do so and to resort to all manner of tricks to arouse public sympathy. It is an ancient practice for the labor bigwigs to run to the Great White Father in Washington every time they get themselves into a dilemma. And such a dilemma, as a usual thing, cannot be viewed impartially or objectively except as one of the labor leaders' own making and the result of their unrealistic and vainglorious thinking or delusions, springing at least in part from the human folly of self-aggrandizement.

A scant or bare majority of the Darlington workers—certainly not more than eight and the votes of even those eight were contested—voted for union representation in the first place. Certainly subsequent developments seemed to



## EDITORIALS

bear out the well-founded suspicion that a considerable number of those who did vote for the T.W.U.A. conceded, or certainly indicated willingness to, that they were under some degree of both misapprehension and misadventure when they cast their ballot.

In view of every aspect of the unhappy situation, any reasonable person can hardly ignore the realization that the A.F.L.-C.I.O. is as well-heeled now as probably at no other time in its history. It is manifestly well able to employ many experts skilled in the pursuit of political pressure and of manufacturing propaganda of a type which so patently blends, sometimes skilfully and sometimes not so skilfully, the dubious accomplishments of exaggeration and fact-twisting.

If a government order, backed up by a judiciary *dèg*ree, should direct a company to continue an operation it does not consider profitable by any reasonable yardstick, how and by what method of procedure might it be enforced? So unusual a situation would inevitably pose enough other complicated questions to make a successful \$64,000 quiz contestant commit intellectual *hara-kiri*. It is difficult to perceive how anyone could view the matter in any different light.

Of course there is the well-known precedent of the union big-wigs having once persuaded former President Truman to seize the steel mills in the name of the government. The U. S. Supreme Court, it will be easily remembered, held such a reckless action on the part of the administrative head of the government to be unconstitutional. So it is hard indeed to imagine that so palpable a past mistake might be repeated now in the case of an individual cotton mill in South Carolina that is relatively microscopic in comparison with the nation's giant steel industry.

From any angle the unusual situation might be viewed, it would seem difficult also to escape the conclusion that the T.W.U.A. top brass have simply run into another one of the self-devised frustrations which have so consistently sprung up in the well-heeled and ballyhooed campaigns to organize the Southern worker, who by and large is a rather independent fellow and capable of doing his own thinking.

The main difference this time, it would appear, is that the frustration created by the foolhardy Darlington venture is somewhat more deep-seated and more complex than those that have gone before. It is comparable perhaps, in this day when it is something of a pastime of pseudo-eggheads to bandy psychiatric terminology in every direction of the wind, to the difference between a neurosis and a psychosis.

One is reminded, too, of the *blase* comment one hears from time to time that, if and as he should desire, any highly skilled economist or professional publicist with a flair for the science of semantics can make the simplest set of statistics convey any impression considered desirable for the cause he represents. Rather than being the embodiment of smart facetiousness, such an expression of weary indifference contains at least a kernel of truth.

The species typified by the cynical aphorism that "one is born every minute" is not as yet close to the point of extinction, and doubtless the extremes of discernment and gullibility shall remain forever with us in some degree. No one of course has ever come to expect either moderate statement or objectivity as among the spectrum of attributes or virtues with which the paid or professional agitator is nat-

urally endowed. Such characteristics would naturally be basic handicaps to any movement's leaders whose degree of financial or political well-being is dependent upon the extent of regimentation of the human being and his way of thinking.

It's to be expected that a labor boss must make the accusation of "exploitation of labor" at every turn—so much so, in fact, that mere repetition has begun to make such terminology actually meaningless to the popular mind. The South is naturally the most frequent target for this type of accusation because the labor chiefs have always encountered in the average skilled, loyal, intelligent and independent Southerner the least susceptible of all American production workers to regimentation or any type of bossism.

Actually the unions have never been able very successfully to refute the fact that Southern textile workers fare better than those in the East, where management is weighted down with feather-bedding union exactions and where so many industries have actually had no alternative to economic survival except to seek a different climate.

There are limits, after all, to human gullibility and credulity. Reading some of the fulminations of certain widely-syndicated pro-labor columnists, whose source material so obviously comes from undisguised or faintly disguised union sources, one wonders about the credulity of the authors of such daily stunts in evaluating the credulity of their readers.

It has never been surprising, of course, that Southern workers generally have been suspicious of the real intent of the unions and those who dictate union policy. The distorted and slanted pictures of anti-union practices or malpractices in the South can but only extend the suspicion of Southern workers far beyond their own ranks.

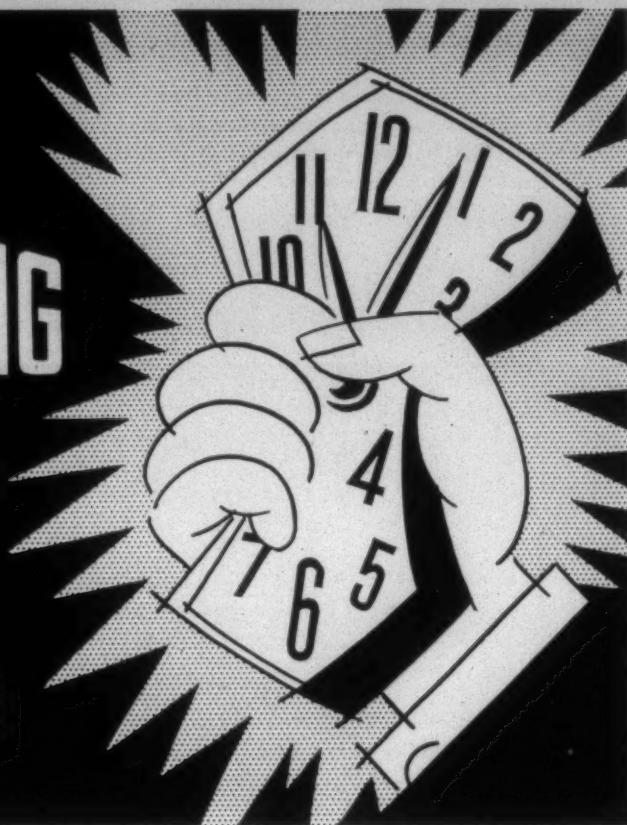
Credulity, in a word, has its breaking point. And woe must inevitably become the fate of labor's bosses and coat-tail-hangers-on, or anyone else dependent on wooing public opinion or retaining its favor, who miscalculates it very far. Such instances of the toppling of the self-glorified or the would-be mighty fill not only the pages of history but particularly the record of contemporary times.

In this connection, one is reminded at the moment that there seems evidence on every side to indicate that the great rank-and-file of organized labor in the United States apparently exhibited utter disregard of the exhortations of the master minds, who flourish most spectacularly under a regimented following, and to have joined conspicuously in the national landslide for the re-election of President Eisenhower.

Again in contemporary times, the policy by and large of textile management in the South—one might say, more broadly, management in the South as a whole—has generally been to ignore the irresponsible charges, accusations and innuendos of blatant labor leaders, organizers and propagandists. Publicly to attempt refutation, in the newspapers or otherwise, often lends to such preposterous union claims a dignity which certainly they do not deserve in the first place. It often simply affords labor what it most prefers—the opportunity, in an aura of dignity and respectability it usually does not command, to compound its objective and get its propaganda across further, at least from the standpoint of the printed word in the presumably unbiased general press. Newspaper tradition dictates that in its news columns both sides of a controversy must be given a degree of equal representation regardless of how fantastic or irre-



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## EDITORIALS

sponsible the claims of either side might appear to be.

In the light of the rather unusual nature of the developments at Darlington, it is certainly no cause for surprise that the people of South Carolina, if the comment of every major newspaper of the state which has come to our notice is to be regarded as a criterion on public opinion, are quite naturally skeptical. They are in fact beginning to suggest that if the T.W.U.A. leaders want the government to compel the board of directors of the Darlington Mfg. Co. to continue operating an unprofitable operation which they now consider too much of a burden, then the T.W.U.A. itself might or should be willing to demonstrate its sincerity by considering buying the plant when it goes on the auction block.

Thereby, of course, it would have an opportunity to practice itself some of the "paternalism" of which it has so often, and so disparagingly, accused Southern manufacturers. In a word, if the union is so sincerely concerned with maintaining jobs for the Southern workers or even creating new jobs, it might try to prove such a fact. Otherwise, under the present unenviable situation it has created for itself, many independent-minded people could well consider the union comparable to the never-to-be-admired individual who can dish it out but can't take it.

Of course it is within the province of local management to know best, in the light of variable conditions, climate, attitudes and the nature and credibility of union accusations or insinuations, what policy or course to take in informing

the public of a community or area of the true and actual state of affairs or whether, as is quite often the case, any public recognition at all of the union propaganda merely lends it a measure of dignity and respectability it would never otherwise achieve.

Cases naturally arise, of course, where the innumerable local factors may be in such delicate balance that it isn't simple or easy for management to decide the best or wisest policy. And of course hindsight often can seem better than foresight. The same, of course, is pretty much true of everything. The evidence of this is present in the universal popularity of such aphorisms as "the rule proves the exception."

Mention was made a moment ago of the pertinency, in reference specifically to the Darlington affair, of the collective attitude reflected by the newspapers of the affected area. It does not come within our province even to scan or peruse all the newspapers of any particular Southern state or any area of a Southern states and certainly not to see every issue of these newspapers.

Yet from what we have seen or chanced to see we cannot but be impressed by the unanimity of the sound editorial judgment and perspective of the newspaper editorial columns in viewing the unhappy situation at Darlington where for so long harmonious relations between management and labor existed in a manufacturing plant estimated to have provided at least a third of the town's economic base.

In no sense do we want to minimize the seriousness of the plight which may be the town of Darlington's nor are we lacking in sympathy. We should be utterly unrealistic, however, if we do not note that if new owners are to buy

## TEXTILE INDUSTRY SCHEDULE

— 1956 —

- Nov. 26-30 (M-F)—**NATIONAL EXPOSITION OF POWER AND MECHANICAL ENGINEERING** (sponsored by American Society of Mechanical Engineers), New York Coliseum, New York City.
- Nov. 27-30 (Tu-F)—**NATIONAL CHEMICAL EXPOSITION** (under auspices of American Chemical Society), Cleveland (Ohio) Public Auditorium.
- Dec. 1 (Sa)—**SOUTH CENTRAL SEC., A.A.T.C.C.**, Hotel Patten, Chattanooga, Tenn.
- Dec. 4-5 (Tu-W)—Conference, **COATED FABRICS DIV., SOCIETY OF THE PLASTICS INDUSTRY**, Hotel Commodore, New York City.
- Dec. 8 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Atlanta, Ga.

— 1957 —

- Jan. 28-29 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, St. Louis, Mo.
- Jan. 28-31 (M-Th)—**PLANT MAINTENANCE & ENGINEERING SHOW**, Cleveland (Ohio) Public Auditorium.
- Feb. 25-27 (M-W)—**GEORGIA SEC., AMERICAN SOCIETY FOR QUALITY CONTROL**, Georgia Institute of Technology, Atlanta, Ga.
- Feb. 25-Mar. 1 (M-F)—**INTERNATIONAL HEATING & AIR CONDITIONING EXPOSITION** (sponsored by American Society of Heating and Air Conditioning Engineers), International Amphitheatre, Chicago, Ill.
- Feb. 27-Mar. 1 (W-F)—**COTTON RESEARCH CLINIC** (sponsored by National Cotton Council), General Oglethorpe Hotel, Savannah, Ga.
- \*Mar. 14-15 (Th-F)—**SOUTHERN TEXTILE METHODS & STANDARDS ASSN.**, Clemson House, Clemson, S. C.
- \*Mar. 14-15 (Th-F)—Annual meeting, **TEXTILE RESEARCH INSTITUTE**, Hotel Commodore, New York City.
- Mar. 28-29 (Th-F)—**TEXTILE QUALITY CONTROL ASSN.**, Clemson House, Clemson, S. C.
- Apr. 4-6 (Th-Sa)—Annual convention, **AMERICAN COTTON MFES. INSTITUTE**, Palm Beach Biltmore Hotel, Palm Beach, Fla.

- Apr. 9-11 (Tu-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), International Amphitheatre, Chicago, Ill.
- Apr. 10-12 (Th-Sa)—Annual meeting, **ALABAMA COTTON MFES. ASSN.**, Buena Vista Hotel, Biloxi, Miss.
- May 1-2 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Clemson House, Clemson, S. C.
- May 1-4 (W-Sa)—Annual convention, **COTTON MFES. ASSN. OF GEORGIA**, Emerald Beach Hotel, Nassau, Bahamas.
- May 20-25 (M-Sa)—**NATIONAL COTTON WEEK** (sponsored by National Cotton Council of America).
- June 20-22 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, Ocean Forest Hotel, Myrtle Beach, S. C.
- \*Sept. 12-13 (Th-F)—Annual meeting, **CARDED YARN ASSN.**, The Cloisters, Sea Island, Ga.
- \*Sept. 27-28 (F-Sa)—**COMBED YARN SPINNERS ASSN.**, The Cloister, Sea Island, Ga.
- \*Oct. 2-3 (W-Th)—**CHEMICAL FINISHING CONFERENCE** (sponsored by National Cotton Council), Hotel Statler, Washington, D. C.
- Nov. 14-16 (Th-Sa)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Hotel Statler, Boston, Mass.

— 1958 —

- Jan. 27-28 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, Phoenix, Ariz.
- Apr. 10-12 (Th-Sa)—Annual convention, **AMERICAN COTTON MFES. INSTITUTE**, Hollywood Beach Hotel, Hollywood, Fla.
- May 26-29 (M-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), New York Coliseum, New York City.
- June 19-21 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, The Grove Park, Asheville, N. C.
- \*Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.
- †Fall—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

\*Listed for the first time this month.

‡Tentative listing.

†Changed or corrected from previous issue.





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## EDITORIALS

the Darlington plant, either as a textile operation or with some other type of manufacturing enterprise in mind, they too will want to know what kind of co-operation they will get from Darlington workers and what the attitude of the community is, evaluated from all the aspects of totality.

At the moment this is prepared for publication, the ultimate outcome of the unfortunate situation at Darlington is not known, nor is there any definite indication of just what the final outcome will be. The 37,500 spindles and the 900 looms of a cotton mill which has been a community for nearly three-quarters of a century are silent and only a very slim skeleton force remains in the plant. The workers have picked up their final paychecks. For a while they will collect unemployment insurance. Even prior to the expected formal announcement of the company's plans to liquidate, some employees already, according to reports, had gone elsewhere in search of employment.

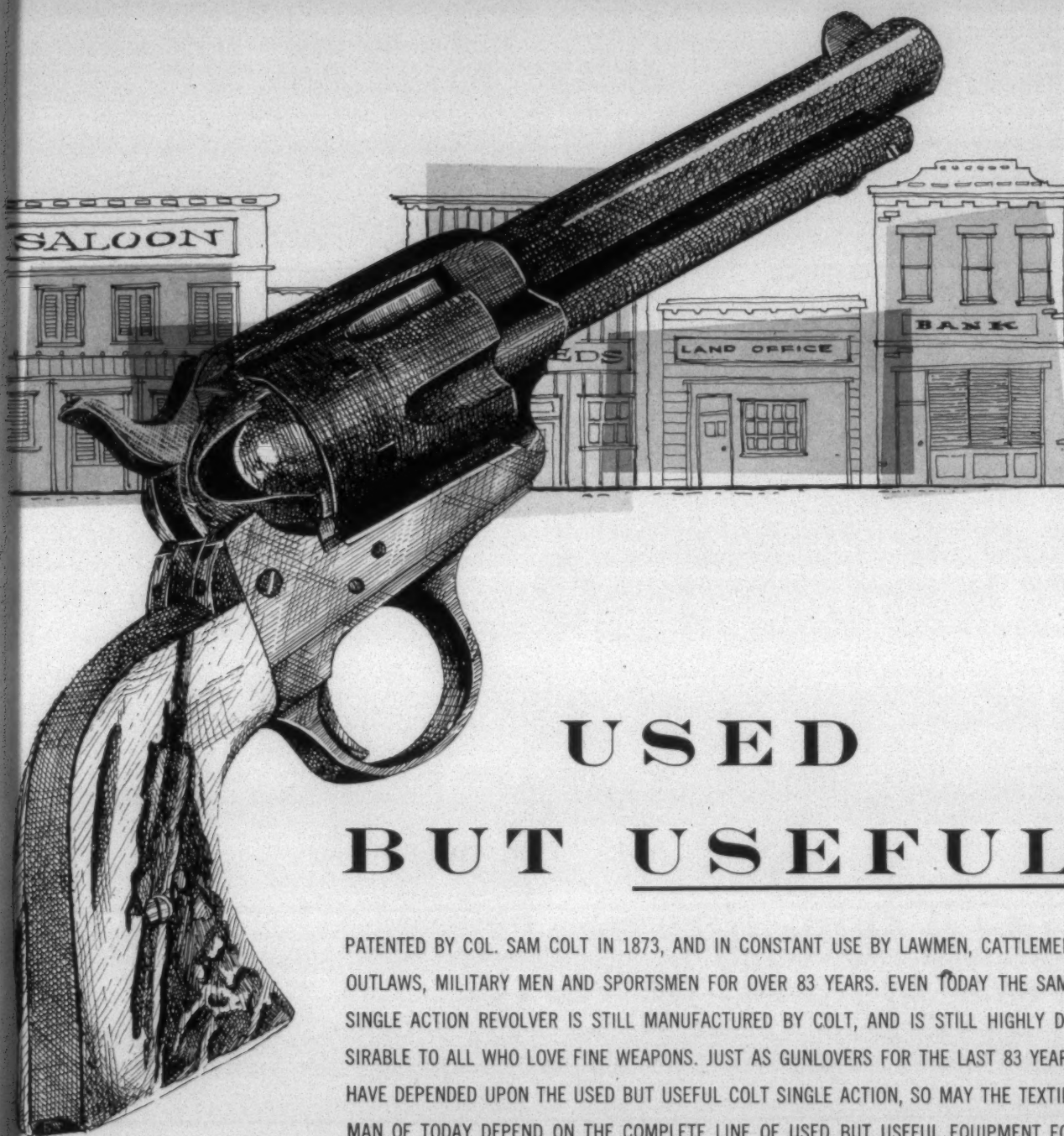
Mayor Tom Buchanan of Darlington has reported that several prospective buyers have shown much interest in acquiring the plant when it goes on the auction block the second week in December. Business interests at Darlington estimate the suspension of this mill's operations reduced the community's industrial payroll by one-third, with consequent unfavorable impacts upon retail trade and other local business. County officials estimate it will be necessary to increase the countywide tax rate by two cents per \$100 of assessed evaluation to replace lost revenue. Tax authorities also estimate the plant itself has paid about one-eighth of the property taxes levied and collected by the town of Darlington.

Both the city of Darlington and the county of Darlington have moved even to grant a ten-year tax-exemption status to any concern purchasing and operating the textile mill being sold by the Darlington Mfg. Co.—a practice which so many Southern communities have usually avoided and definitely frowned upon, though some few other communities have resorted in the past to such lures. Under the circumstances few antagonists or protagonists of such economic practice doubtless could be found who do not sympathize with, for the moment at least, the course of expediency Darlington pursues in its unpleasant dilemma.

For, it goes without saying, Darlington has been a victim of unfortunate circumstance. There certainly could be no one who does not hope a happy ending or solution is found for the town and its people. Whatever has happened so far, it can naturally be expected that the union will seek to convert into ammunition for its purpose. At the same time it would be most unrealistic to conclude that thoughtful communities can close their eyes and ears to the Darlington affair, or that they might fail to heed the lesson of experience, if indeed they have not indelibly perceived as much already from somewhat comparable experience elsewhere in an earlier day.

Not all raw cotton is white. It can also be grown in hues of green and brown. Colored cottons, however, turned out to be impractical. Originally some mills were intrigued by the idea of colored cottons as a means of reducing dye costs. Plant breeders came up with the green and brown cottons, but the color faded upon exposure to sunlight and uniform coloring couldn't be maintained. And the brown cottons were too weak to spin.





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FOR THE TEXTILE INDUSTRY



## Becoming Better Mill Managers

By WENDELL M. PATTON, Assistant General Manager, Shuford Mills Inc., Hickory, N. C.

**Dr. Patton, formerly with the management consulting firm of Bruce Payne Associates, was the principal speaker at the Fall meeting of the Piedmont Division, Southern Textile Association, held Oct. 27 at the North Carolina Vocational Textile School in Belmont.**

A recent article in the American Management Association's *Management Review* attracted considerable attention. It was a report on several years' research conducted among successful managers and executives in trying to find out who gets to the top. This American dream of ours of climbing from the bottom to top positions of power is something in which we all like to believe. Yet recently we have heard many people say that this can no longer be realized, that the seats at the top are now permanently reserved for the sons and families of those who are already there and that ambitious men born to low position, regardless of their ability and knowledge, can no longer work their way to the top.

This study conducted by the American Management Association surveyed over 8,000 top executives of large businesses and industries over the United States, and all in all the results show very clearly that there has never been greater opportunity for us to arrive at managerial positions than today.

There is a crying need for good executives in every type of industry. All of the authorities are predicting this need will be even greater five years from now. The reasons for this shortage are numerous. Our population is growing and consumer demand increasing, companies are expanding and diversifying and growing at phenomenal rates. Our businesses are becoming more complicated and greater skills are needed to manage these businesses. Today management is becoming more conscious of its need for professional managers and its responsibility for filling its vacancies effectively. They are becoming aware of the fact that our colleges and universities cannot create good managers and they have tackled the problem themselves. Lawrence Apley has referred to this as a managerial renaissance.

Yet in spite of the tremendous opportunities before us today, we see hundreds of men with the training, experience and interest who are never considered for these better jobs, and again we see hundreds of men who get the chance for these jobs and fail, who never make good. Again, we see hundreds of men who may get the chance but early in life develop stomach ulcers, heart conditions, neuroses and so on down the line.

The big question is "Why?" Why are we not considered and what are the things that would cause us to fail?

This is a difficult question. There is no simple, clear-cut answer but we have one outstanding problem that's faced by all types of industry, and that is making general managers out of specialists or technicians. Without doubt today this is the weakest link in our whole company structure. Over the years we have insisted that our new employees be trained specialists. Our schools and colleges have conformed. No one has raised the question as to how you train a generalist. Suddenly, almost overnight, we see increased emphasis placed upon this problem. We see consulting firms and trade associations tackling the problem as well as short, highly concentrated courses and programs being conducted by our universities for business men.

Basically in our companies we have too frequently the superintendent who is still a second hand, the second hand who is still a fixer, the sales manager who is still a salesman. These men have all failed to shift from their specialty onto a more general level. This shift must be deliberate. As we look back on our past work we can see clearly in terms of assignments, fundamentals and procedures.

Now looking ahead to top levels we must see just as clearly the nature of the new responsibilities, the fundamental principles of methods of management, and an organized approach. Many times this business of shifting from a specialist to a generalist is very difficult. Personality problems and emotional interactions which may be buried deep in the subconscious can prevent this shift. Many executive talents are otherwise limited or completely neutralized because this shift is never made.

I would like to approach this problem from three directions. First, let us take a look at the successful executive and see if we can find some of the common denominators that make him successful. Second, let's do the same thing for the unsuccessful executive and see whether there are common denominators that have contributed to his failure. And third, let's put a magnifying glass on some of these specific techniques, methods and short-cuts that successful mill managers use in order to get their job done.

### The Successful Mill Manager

The successful mill manager, whether he is called a manager or a superintendent, makes a career of studying each job that he holds to find what the objectives and purposes of that job are, and he looks even more closely to determine what it will require of him personally. He then achieves success by developing himself to meet the



job requirements. Actually no one knows exactly what makes a good manager and yet from the hundreds of studies that are being conducted we are beginning to get an idea of some of the characteristics that tend to make a man successful as a manager.

As we list these you may see yourself in them, and if you do the chances are you're well on the way to becoming that successful manager.

(1) He knows his capabilities. Apparently the most successful executives do not hide their light under a bushel. They know the areas in which they are good and they're not afraid to admit that they are good or accept responsibility in these areas.

(2) He knows his limitations. This may be even more important than knowing abilities because only by knowing the weak spots and strong spots can a person reinforce himself where he is weak. He can round out his personal inventory of skills by surrounding himself with competent specialists.

(3) He regards himself as a professional administrator. He doesn't worry about his lack of knowledge in the specific aspects of his job. He very definitely avoids the pressure of trying to know everything about everything. He understands the principle of delegation and he uses it to make his job easier.

(4) He is a student of human nature. Now I say this cautiously because I don't believe that he is exactly as the text books describe him. He doesn't understand people because he loves everybody, perhaps he doesn't, but it's because he knows that shrewd judgement in estimating loyalty, responsibility and knowledge will enable him to get more out of people. Practically all successful executives and managers have had the superior ability of selecting the right people and inspiring co-operation from these people.

(5) He knows how to think straight. This one is so simple it might fool us. People tend to think of the successful executive as the movie version of an administrator—the man who makes every decision immediately,

clear-cut without any hesitation. Actually the case is not this. The real executive doesn't often do this. Our companies are becoming so complicated and so much information and data is necessary before we can make a decision that decisions have to be delayed in many instances. The good executive isn't worried if his subordinates look at him critically when he refuses to make a decision. Actually he may even use his positive procrastination as a method of delegation. He may use it to force other men in his organization to commit themselves and to stick their necks out.

Now, of course, these are only a few of the basic characteristics of successful men and I'm sure that you can think of many others. Now let's look on the other side of the picture at some men who have had opportunities at executive careers and who have failed.

### The Unsuccessful Executive

Let's quickly take a look at some of the things that good managers are not. You may see yourself in some of these, however, I hope not. If we would attempt to list some of the characteristics that have contributed to the failure of managers, the list would probably be almost endless and no one list would fit any single individual. But rather than do that, I would like to take three or four very basic common denominators, things that apparently creep up with such an alarming degree of frequency that we should well be aware that these tendencies exist within us.

(1) An insistence on always being right. We are talking now about the rigorous, logical type thinking with the determination to always be right, the man who must be factually correct in his answer to any problem. Now immediately you are wondering why I would list this as a weakness when basically it's a strength, and you're certainly correct, but we are talking about an extreme. There are many, many jobs in which it would not only be highly desirable but would be absolutely necessary that no errors be made. Positions such as accountants and engineers and research men are paid for their ability to be correct and to perform this rigorous, logical thinking and not to make errors. But today we're talking about the manager's job in which different problems creep up. A fixer can be right in his problems while it's not so easy for a second hand to be always right in his, and it becomes increasingly difficult as we move up the ladder to greater responsibilities. The decisions that have to be made are seldom black or white but will fall in the areas of grey, in-between. There is seldom one answer that is the only answer, but the problem becomes one of developing the answer with the most right and the least wrong. Many times men become internally disturbed and anxious when they are placed in a situation in which it's impossible to function on a factual basis, but this is exactly what happens when they become executives.

(2) Hostility toward authority. This is another characteristic that is frequently encountered among managers who are having difficulty staying on top of their job. Psychologists have referred to it as hostility toward father figures. This is simply a tendency toward varying degrees of hostility toward bosses. It's often true of middleclass children who were forced to conform to parental standards in wearing, toilet training, educational achievement, vocational choice, etc. Actually in the final analysis they haven't had much choice down the line, so what happens?

The result becomes an inner resentment of everyone in

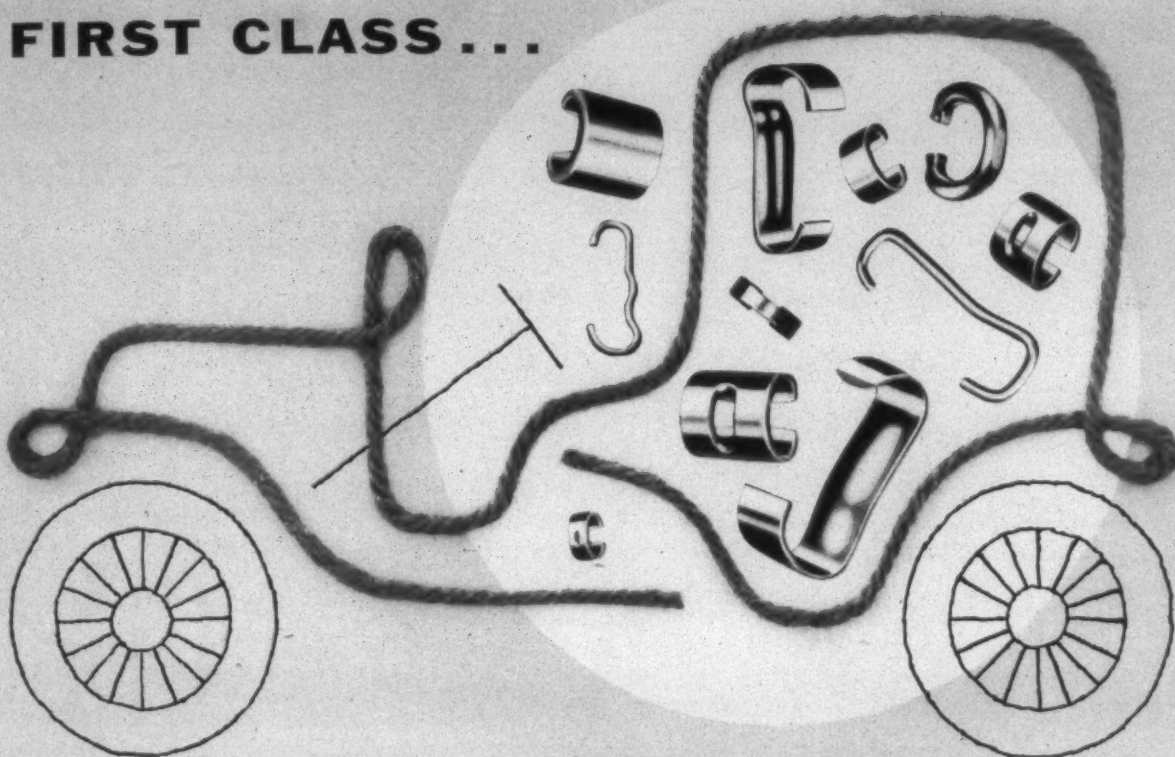


Pittendreigh, Patton, Willard

Pictured at the Fall meeting of the Piedmont Division, Southern Textile Association, were S.T.A. President William M. Pittendreigh (superintendent of Riegel Textile Corp., Ware Shoals, S. C.); Wendell M. Patton, assistant general manager of Shuford Mills, Hickory, N. C., the main speaker; and Piedmont Division Chairman Clarence Willard (superintendent of Pacific Mills, Rhodhiss, N. C.)



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authority. This includes teachers, bosses, judges, policemen, etc., and if it's carried to an extreme it interferes with smooth job relations. It creates a tendency to automatically resist ideas from superiors. The interesting part about this is that when this hostility develops, at the same time an over-dependence develops. On the one hand the person is resentful toward his superior and at the same time he's overly dependent upon this superior for any ideas or plans or originality. Of course, a certain amount is good but we want a happy balance. If it's overdone you can become a "yes" man, but in this instance we're talking about the chronic situation so that your feet drag, which could completely wreck or at least cripple a brilliant career.

(3) Lack of sociability. The third factor that's worthy of mention is the tendency to avoid the close relationships with other people, or the lack of sociability. It's been found very frequently in technicians, engineers and accountants, and it's more or less an independence of need of emotional response or reaction from other people. It seems that many people lack the ability to put themselves in the other person's shoes and to be able to predict how he would react in a given situation. These people find that warm, close relationships will bother them and outwardly they will show remoteness and coldness and actually have very little tolerance or understanding. Human relations and understanding come very hard to this type person.

It's here that trouble develops if we accept the current definition for an executive as one who gets things done through other people. Sometimes it's difficult for us to remember that it isn't what we are but what others think we are that's going to make the difference between success or failure in a managerial career.

One of our greatest weaknesses in management today is the fact that so many executives are incapable of delegating authority and responsibility to their subordinates. In many instances it's because of this lack of sociability or understanding of other people and a fear of letting others get too close to them. The executive who attempts to do everything himself is the executive who is basically insecure and fearful. He resorts to that old familiar technique of building a barrier around himself so that no one will know how weak he really is. We hear so much today about executives being overworked and yet upon close examination we find that while they are overworked many times they do it to themselves. As they are promoted to higher level positions they tend to carry up with them many of the duties and responsibilities of their previous position which should be delegated to a subordinate. Of course, it's easy to see the reason for this. They are somewhat fearful and insecure in their new job and by hanging on to the details of the old job they always have evidence of the fact that they are performing satisfactorily.

### Shortcuts For Effective Action

Of course we can't make any attempt to correct deep-seeded emotional conflicts but at least we can discuss some of the shortcuts to executive action or talk about the bag of tricks that successful managers use in order to get their job running and running smoothly.

(1) Organized for delegation. These two words are so overworked that it's hard to realize how elementary they can be. They mean nothing but look over your job responsibilities and make sure that someone is regularly assigned to

each one of them. It doesn't have to be complicated and it may be that you have to wear six hats in your organization, but it sure helps to chart out what you do and what you delegate.

(2) Establish a control system. This, of course, is a necessity when delegation occurs. The key to decisive action for many successful managers is a system that will wake them up when critical factors are getting away—merely an alarm clock that will ring when things get out of control. And controls needn't be complicated. Take a look at your job. List its five or ten most critical measurements—cost standards, meetings, schedules, dates, turn-over, labor costs, scrap, etc. Circle your calendar to remind you to check them once a week or whenever your experience shows that they tend to drift.

(3) Rely on policy. Whenever you find yourself making the same decision over and over, you're wasting time. A policy should be established to settle routine problems for you. Reduce all of these repetitive decisions to policy and it will save you a lot of time and effort and also make your organization know what your thinking is.

(4) Use good communications. This again is a very overworked phrase and yet there is no issue more vital today in management. You must make sure that information is passed from the top to the bottom, from the bottom to the top, and horizontally from department to department. Again we must remember that it is not what we are but what others think that we are that's going to motivate their action and thinking toward us.

(5) Rely on others for counsel and advice. It's smart to ask assistance from associates and superiors. Today it's a sign of strength not to know all the answers. Seek advice from other people. It's good human relations. It's flattering to those whose opinions are asked and allows for participation.

(6) Develop the habit of concentration. None of us today really know how to concentrate. We don't use our mental ability more than about 20 or 25 per cent effectiveness. When we try to tackle a problem our subconscious mind is concerned with hundreds of other problems. It's like trying to swim with our shoes on. This can be improved with practice. If you don't want to take the time to improve your memory begin using paper and pencil to make notes of details.

(7) Pace your thinking efforts. Be sure that you don't face each problem every day as though it were a major crisis. Be ready to tackle the tough ones but learn to regard most of them as routine. You'll have to remember to keep plenty in reserve for the additional problems that may come up.

(8) Distinguish big from little problems. This, of course, is related to pacing your thinking efforts and it's interesting that some people never know when opportunity knocks or when a critical decision is at hand. In your case you're going to have to weigh the benefits you'll get or the headaches you'll avoid by taking corrective action, and that will show you when an all out effort is called for.

(9) Avoid crisis decisions. Of course we all have crisis decisions to make in running our departments, but to dash about putting out fires is strictly the mark of an amateur. It's poison for the manager. Many times a top level man has come into a crisis-ridden department as a trouble shooter and then by careful planning he can get things running so smoothly that there are hardly any decisions to make. Then he moves up to a better job and a lesser man



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can take over. If you develop the habit of looking ahead and planning you can do the same thing for yourself.

(10) Don't expect to bat a thousand. Even the best hitters now and then fan out and in a management capacity, if you do your job you're going to make mistakes, because day in and day out you are forced to make decisions for which you do not have enough information. Obviously we cannot close our plants and spend two weeks gathering facts and data upon which to make a decision. Consequently we can expect to be in error a large part of the time. The point is to be smart in knowing what kind of results to expect from the decisions you make. Study the field so that you know your chances of being right or wrong. In making a decision it's difficult to be completely right or to satisfy every person or condition. Executives who have nervous breakdowns or get ulcers do so because they don't understand the odds.

(11) Draw a picture of your problem. The old saying, "A picture is worth a thousand words," certainly applies

here. Nothing helps visualize a problem so much as a diagram. Just as visual aids help others to see an idea clearly, your own sketches will help you see your own problems. Keep your mind from being cluttered with related but non-essential points. On paper your main ideas can be emphasized graphically by showing different size blocks, varying positions and colors.

(12) Have alternate solutions up your sleeve. Situations and facts keep changing so the smart thing to do is come up with at least two answers for every problem and keep the second answer in reserve to apply if you were wrong in the first place or if conditions change.

These are merely a dozen tricks of the trade of good managers and if you use them you will find that you would become much more effective and your job will become much easier. Opportunity exists for each of us today as has never existed before. We are living in an area set with danger and insecurity but abounding in opportunity. It's up to you what you're going to do with it.

## Production Order & Packing Slip Procedure

By FRED W. FUDGE, Lyman (S. C.) Printing & Finishing Co.

**The system in use at Lyman was described by Mr. Fudge during a series of paperwork seminars sponsored by Addressograph-Multigraph Corp. recently in various textile centers.**

**T**HE purpose of our production order and packing slip procedure is to produce the required results at the lowest possible cost and in the quickest possible manner. In the system I am about to describe the final results did not occur overnight, but rather evolved during the course of 25 years with major changes taking place since World War II.

The six major purposes of the Multilith offset lot system of production order writing are to: (1) process greige goods; (2) set up delivery schedules; (3) ship customer orders on time; (4) close lots and record production data; (5) maintain a standard cost system; and (6) maintain inventory records on tabulating equipment.

When a customer places a firm order in New York, it is routed to the New York planning department. There a delivery date is placed on the order, the greige goods requirements are set up, and packing orders are teletyped to the finishing plant. The planning department of the finishing plant, from the packing order information, simultaneously types a two-part Multilith Systemat master set (Fig. 1).

One part is known as the keir put-up master and contains the following key information: cloth number; department number; lot number; finish; finish tabulating code; total greige yards—also details by shade or color; schedule (by process center); and special processing instructions.

The keir Multilith master is then filed in the planning department by merchandise department, lot number and scheduled processing date. The other part, the put-up Multilith master, is sent to the order department where it is filed by merchandise department and lot number.

As subsequent packing orders for the same lot are received from New York, they are added to the put-up lot master in the order department. Each week the order department figures a "surplus in process" position for each lot by shade or color and put-up based on a previously determined first quality expectancy. This surplus in process is given to New York each week as part of the stock report or available for sale report. (The first-quality surplus in process equals the greige yards processed, less the percentage of irregulars expected.)

When the put-up room calls for put-up instructions on a given lot, the clerk in the order department pulls the put-up lot master from the file, inserts the date, determines the put-up for any surplus and turns this master sheet over to the Multilith operator, who runs the required number of copies (eight to ten) on a Model 1250 Multilith offset process duplicator.



The duplicated copies are distributed by the put-up clerk to the various put-up centers such as doublers, winders, hookers, sample and shading. A copy is also given to a packing slip typist who prepares the necessary packing slips against the individual packing orders assigned to a lot. Any changes in order application, put-up instructions, etc., are made by special change slip for each lot by the same typist.

The planning department daily checks the schedule for processing on a given day. A Multilith pencil is used to write in the process data on the keir Multilith master as







well as greige bale numbers. The keir Multilith masters are then turned over to Multilith operator who duplicates the required copies (Fig. 2) on a Model 1260 Multilith offset duplicator.

The duplicated copies are for: process centers; greige room check sheets; tabulating department; lot closeout desk; New York office; cost department; sample room—approvals and headends; blue card—to denote start of a lot; and buff card—to denote end of a lot.

You will note that we have duplicated a complete set of required papers for both clerical and production personnel from one typing on the Multilith master set. The duplicated copies tie in our standard costs, with our closeout or production recording and our I.B.M. tabulating installation where greige, in-process, and finished inventories are maintained. There is no chance of any of our clerical centers getting wrong finish names or misinterpreting vital information.

Our I.B.M. section uses the greige check sheet to credit finished goods inventory and debit process inventory. In turn, the close-out desk uses the lot sheet to record completion of a lot, and to send the data to the tabulating department where it is used to credit process inventory and debit the finished goods inventory. At least once a month the tabulating section runs off a late lot list for plant use.

When the packing slip typist receives the put-up instructions she goes to the unfilled packing order file, pulls the orders assigned to the put-up instruction sheet and determines at that point if the packing slip should be typed with carbon copies, or typed on a Multilith master. Generally, when an order is for 14 or more cartons of a printed style or shade a Multilith master is prepared on an electric typewriter.

Everything on this packing slip master is the same as on the hand-typed packing slip, except the case number which is omitted. The number of cartons are determined and so noted on the master, which is then turned over to the Mul-

tilith operator. The Multilith operator duplicates six carbon-backed copies which are collated in reverse order so they will be in proper sequence after duplicating (Fig. 3).

On large orders we have duplicated as many as 600 sets of six copies per hour, which if typed with carbon copies would require 15 hours of typing. After these sets are run, they are returned to the packing slip typist, who stamps a consecutive carton number on each set with a numbering machine. The packing slips are then sent to the packing room.

I might add that considerable proofing work is eliminated as the typed master is proofed only once, and all duplicated copies are assured of accuracy. We pack over 3,000 cartons a day so you can very readily see the saving effected through the use of Multilith offset duplicating equipment.

We originally used the Hectograph spirit process, but due to the lack of legibility, lack of permanency and of correction difficulties we changed to our present method of using Multilith masters and the Multilith offset process. Not only did we attain top legibility, permanent copies and ease of corrections, but our duplicating operations were considerably speeded.

Although today many of us are investigating the possible use of electronic equipment in our offices, I believe we all should check our present clerical systems and procedures to see if we are basically performing our clerical functions in the best and most economical manner. Such office machines as the new Automatic Multilith Model 1250 offset duplicator can be put to efficient use on basic programs without the investment of considerable cash for electronic equipment. After we have cleaned up and squeezed out uneconomical clerical operations, then I think we should turn to the marvel of this decade—the electronic computers. In the process of checking and reviewing our basic clerical functions we should consider our revisions in the light of fitting into the general procedures required for electronic equipment.

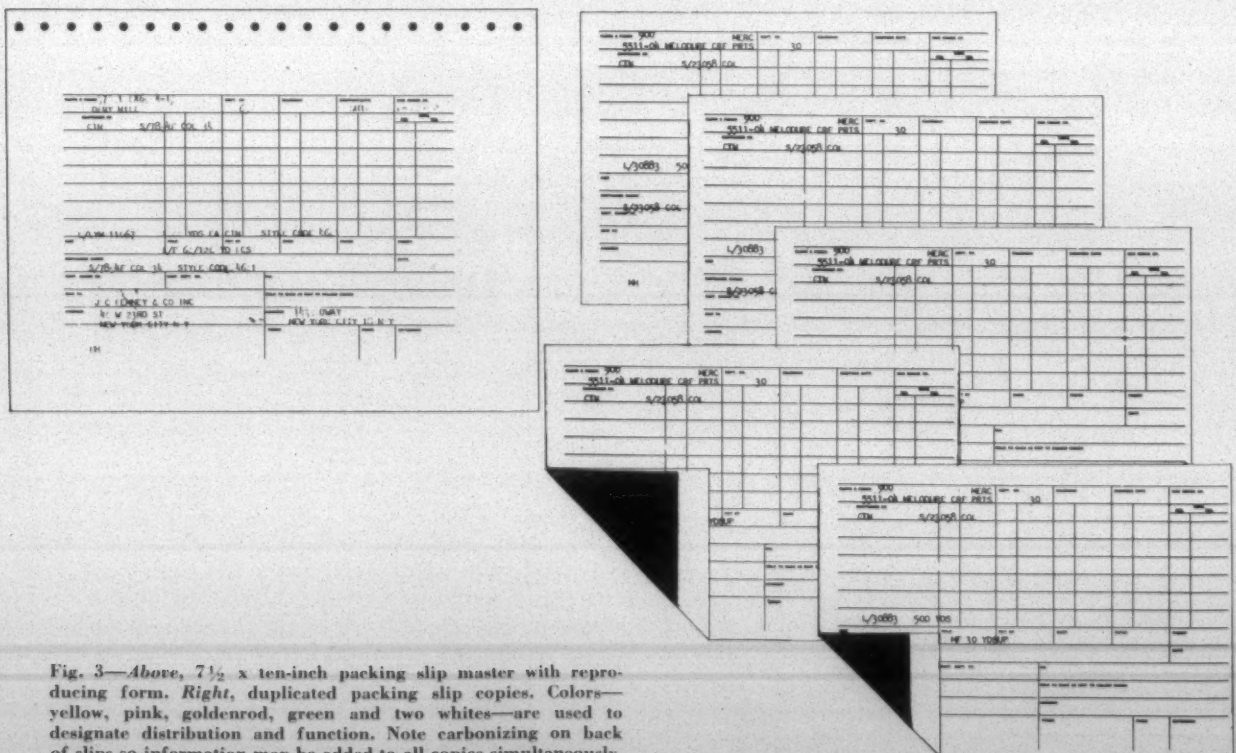


Fig. 3—Above, 7 1/2 x ten-inch packing slip master with reproducing form. Right, duplicated packing slip copies. Colors—yellow, pink, goldenrod, green and two whites—are used to designate distribution and function. Note carbonizing on back of slips so information may be added to all copies simultaneously.



# The Textile Industry In Western Europe

By DR. WILLIAM HAYS SIMPSON

**This report from Dr. Simpson, a Duke University political scientist, was prepared by him while on a tour of Europe.**

IT would seem that there is general improvement in production of textiles in a number of western European countries. The textile industry, however, is probably suffering more in Italy than in any other country of free Europe. On the other hand Germany is among the most successful countries of Europe in the production and marketing of textiles.

In the export trade all of the countries have felt the effect of restrictions placed on the importation of cotton goods by various countries. No small amount of worry has been experienced by cotton manufacturers competing with producers in Asiatic countries for world markets. This has resulted in the expansion of the export trade in one area and the contraction in another. Countries like India and Japan, with cheaper labor than Western European countries, have thus been able to acquire a larger share of the world markets.

Cotton manufacturers are worried in continental Europe, as are those in England, about what the policy the United States will be in the disposal of the millions of bales of cotton which the U. S. now has in storage. Many manufacturers are afraid to make large commitments because they fear that the American government might make available cotton now in storage in such quantities and at such prices as to cause them great financial losses. This has resulted in a hand-to-mouth operation in numerous cotton mills throughout the area.

Many problems face the cotton manufacturers of Europe who are on the one hand competing for world markets against textiles produced in modernized mills in America and on the other hand with products from mills in Japan and India produced by cheap labor. The combination restricts the market so it is expected production of cotton goods will be farther curtailed in Western European countries during the coming years.

While King Cotton may have received its crown in Western Europe its economic importance in that area has declined somewhat in relation to the rest of the world. For example, of the estimated world's cotton spindles of 164,979,000 in 1928, 91,810,000 were in what is now known as "free world" Europe. By 1955 the world's total had declined to 129,838,000 spindles of which only 54,211,000 were in free world Europe, and of this number, almost half, 25,183,000 were in the United Kingdom. It may be noted too that the consumption of cotton for the years 1934-38 in free world Europe averaged 7,331,000 bales as compared with 7,279,000 bales in 1954-55. However, the world's total consumption of cotton increased from 29,770,000 to 36,583,000 bales for the years mentioned above. Thus while the total bales of cotton consumed in free world Europe declined 52,000 bales, the world's consumption increased 6,813,000 bales.

*France*—Of the countries of continental free Europe, France had the largest number of cotton spinning spindles

in operation of 1955. While the total number of spindles in operation varied with the months, according to the *International Year Book*, the number declined from 6,660,000 in January 1953 to 6,300,000 in January 1955. During the same period the number of looms in operation declined from 131,000 to 122,000. By the end of the third quarter of 1955 there were less than 6,000,000 spindles and about 102,000 looms in operation. In January 1953, 82 per cent of the spindles were operating by one shift and the remainder by two shifts. By 1955 the percentages had changed to 21, 73.5 and 5.5 per cent for the first, second and third shifts respectively.

French productivity teams that visited the United States returned with ideas for modernization of methods and mills to improve productivity. While some advance has been made along this line there is still need for additional education of and better co-operation of the operatives.

The export of cotton yarn from France declined from 8,111 in 1954 to 5,811 metric tons in 1955 while the export of cotton piece goods declined from 53,760 to 40,470 metric tons during the same period.

While the home market has improved recently because of military orders and greater demand from retailers, the export of cotton textiles continued to decline during the first quarter of 1956. The decline of exports to Indo-China from 13,352 in 1954 to an annual rate of 2,819 tons for the first quarter of 1956 accounts for the greatest loss in foreign markets.

*Italy*—While there are over 5,600,000 spindles in Italy, many are not in operation because of the slump in both the home and foreign markets. The production of cotton yarn and cotton piece goods dropped 28,839 and 10,144 tons respectively from 1952 to 1955. During the same period exports of cotton yarn declined from 12,534 to 11,135 tons while the export of cotton piece goods dropped from 17,208 to 10,094 tons. Some of this decline was due to protective measures by various foreign countries and to competition afforded by cotton manufacturers in other parts of the world.

While it is pointed out by Alberto Calli, writing in the *International Year Book* 1955-56, that the three principal aims of Italian cotton manufacturers are the modernization of the plants, bettering of handicraft and the improvement of qualitative production, some 65,000 operatives have been laid off during the past five years.

The home market did not help matters for it was hurt by the importation of used apparel items from the United States. These were of particular service in agricultural districts. But it is found that due to poverty in Southern Italy the cotton needs of the people in 1956 is about six pounds a person a year while in other European countries it is generally about eight to ten pounds a person. It is not surprising, therefore, that it is reported that business activities in Italian cotton trade continued at a low ebb during the first quarter of 1956, that numerous mills are on short time and there is no reason to hold optimistic views for the future of the cotton trade in Italy.

*Federal Republic of Germany*—In January 1956, there



were 5,950,000 operating spindles, some 55,000 below that of 1955, in the Federal Republic of Germany. Production of cotton yarn had increased from 240,484 in 1952 to 298,968 tons in 1955 while the production of cotton piece goods increased from 200,551 to 242,614 tons during the same period. During the same years there was a decided increase in exports of cotton yarn from 1,740 to 3,718 tons. While the export of cotton piece goods was lower by 2,510 tons in 1955 than in 1952, the market was some 1,660 tons better than for the year 1954. Market conditions showed improvement during the first quarter of 1956.

**Holland**—In 1955 Holland had 1,099,000 spindles and 44,803 looms in operation. Production of cotton yarns showed an increase of 3,845 tons in 1955 over that of 1952, while for the same years an increase of 10,190 tons was realized in the production of cotton piece goods. In the export of cotton yarn, Holland has shown a steady increase since 1952 but during the same period there was a decline in the export of cotton piece goods. However, there was a small increase in 1955 in the export of both commodities as compared with 1954.

**Belgium**—While the number of spindles decreased to 1,662,000 the first quarter of 1956, there were 1,752,000 spindles and 39,000 looms in operation in Belgium in 1955. Production of cotton yarn in 1955 was up 3,386 tons over 1952; likewise cotton piece goods by 12,204 tons for the same years. While the export market for Belgium textiles was better in 1955 than in 1952, there was a slight decrease in 1955 as compared with 1954.

## M. Y. Cooper New President Of Carded Yarn Association

The Carded Yarn Association, holding its annual convention Oct. 25-26 at the Fort Sumter Hotel, Charleston, S. C., elected M. Y. Cooper of Harriet & Henderson Cotton Mills, Henderson, N. C., as president for the coming year. Mr. Cooper succeeds J. G. H. Morris, president of Adelaide Mills, Anniston, Ala.

In the election of other officers, J. A. Conner of Hyde Park Mills, Covington, Tenn., was elevated from second to first vice-president, and A. J. M. Wanamaker of Orange Cotton Mills, Orangeburg, S. C., was elected second vice-president. E. O. Fitzsimons of Charlotte, N. C., was re-elected executive vice-president, secretary and treasurer. Elected directors for three-year terms were Frank Pate, Wehadkee Yarn Mills, West Point, Ga.; B. D. Banks, Grantville (Ga.) Mills; Hyman L. Battle, Rocky Mount (N. C.) Mills; C. L. Little, Little Cotton Mfg. Co., Wadesboro, N. C.; and Harold Mercer, Firestone Textiles Inc., Gastonia, N. C.

Mr. Morris, in giving the outgoing president's annual report, pointed out that members of the association produced about 340 million pounds of cotton yarn and between 35 and 40 million pounds of man-made fiber yarn in the past 12 months. This production, he said, resulted in the consumption of about 800,000 bales of cotton, and gave employment to 25,000 workers with annual total wages of about \$65 million.

In another principal address, H. K. Hallett of Charlotte,

vice-president of the Kendall Co. and a former president of the American Cotton Manufacturers Institute, told members of the association that "we are in a changing world. New developments are taking place. Customer requirements are shifting constantly. If mills do not keep abreast and even ahead of these changes, they will find themselves with fewer and fewer customers. It is the mill which is alert to its customer's need that will stay ahead of the game and remain in business."

He recommended four steps to the group: (1) technical engineers to provide liaison between the spinners of carded yarn and the industry's customers; (2) product and market research in co-operation with the industry's customers and other groups which contribute to the product made available to ultimate consumers; (3) computing of accurate costs for each count of yarn, to avoid destruction of markets for new or old products on the one hand and the destruction of profits on the other; and (4) long range planning to consider markets, new products and financing for capital requirements.

On the social side, the meeting included an 18-hole Callaway System golf tournament. Low net winners in the members' division were: (1) Welsford Bishopric; (2) J. T. Gaw; (3) J. G. H. Morris; (4) Leonard Moretz; (5) W. D. Johnson; and (6) C. V. Garth. Low gross winners in the members' division were: (1) T. P. Roberts; (2) L. E. Bowen Jr.; (3) R. L. McCommon Jr.; (4) Phil Albright; and (5) H. M. Jones.

In the non-member category, low net winners included: (1) John K. Gillespie; (2) R. F. Howell Jr.; (3) A. W. Latta Jr.; and (4) E. F. Sherman Jr. Low gross winners were: (1) C. W. Clark; (2) Allison Davant Jr.; and (3) Herman McManaway. Receiving a special prize for the highest gross score was Frank Cloninger.

## Ultrasonics—New Tool Of Production

American industry will buy more ultrasonic equipment in 1957 than in all previous years, it was predicted Nov. 14 at an ultrasonics symposium held in New York City. The market for industrial application of ultrasonics, silent but remarkably powerful sound waves, will undergo a three-fold expansion in the next 12 months, engineers at the meeting said. The "silent" sound waves, they say, will dye fabrics, scour fabrics, treat wool to prevent shrinkage, and clean and degrease metals. And these are only a scant few of the applications either under development or now in use.

The basic principle by which ultrasonics performs its functions was described at the symposium as a "cold boiling" scrubbing effect. Inaudible sound waves or vibrations pitched too high to be heard by the human ear, above 18,000 cycles per second, are created by ultrasonic transducers, electrically produced by generators.

The symposium and practical ultrasonic demonstration was jointly sponsored by Acoustica Associates Inc., leading designer and manufacturer of ultrasonic systems in this country, and by Mullard Ltd., one of the largest electronics manufacturers in Great Britain. In order to make the British company's ultrasonic discoveries more readily available in this country, Acoustica has been named national distributor for Mullard. Acoustica has also stepped up its production more than 175 per cent at its plant in Glenwood Landing, Long Island, N. Y., to meet ever-increasing demands for ultrasonic systems in every field.



# Opening, Picking, Carding & Spinning

## A Manual For Testing Procedures

By GUS GUGGENHEIM, Quality Control Supervisor, Buck Creek Cotton Mills, Siluria, Ala.

### Part Four (Package Size)

ONE of the major considerations facing the modern fiber processing plant is package size. Small packages have been, since the upsurge in wages, a heavy drag on the labor cost sheets. The assurance that a mill operation is getting all possible weight is necessary if the optimum efficiency is realized. This is simply a matter of fact.

An important feature of card and drawing package size (can content) is the number of coils per layer. A change in coils per layer allows more or less air to reside between the coils in each layer and thereby the number of pounds of stock in the can is directly affected. In some cases the number of coils per layer changes the can content as much as ten per cent. This means that the card's doffing cycle may be lengthened by ten per cent or the drawing will run ten per cent longer between doffs or the creels behind the roving frames will run ten per cent longer. The snowballing effect of the machine efficiencies is obvious.

The coils per layer are easily found by following this procedure. A mark is placed on the side of the card sliver can. Now by looking between the top of the can and the bottom of the coiler head, the number of revolutions of the tube gear may be counted during the time taken for one revolution of the chalk mark on the sliver can. The number counted is recorded and labeled "coils per layer." Successive counts should be made on all cards and each head of drawing.

The card and drawing makers apparently, over the years, have made 18, 20, 25, 30 and 33 coils-per-layer deliveries. It is obvious that within the other limiting factors of the machinery the larger number of coils per layer are most desirable.

Tests run on drawing coils per layer recently showed that the cans were receiving 25 coils of sliver for each revolution of the can table. This drawing had a gearing diagram as shown in Fig. 1. The gear which is encircled on the upright shaft was changed from 12 teeth to nine teeth thereby changing the coils per layer from 25 to 33. The increase in coils per layer allowed the cans to hold approximately 10.8 pounds, whereas, the cans had previously held only 10.0 pounds. This represents an increase of eight per cent more sliver. If this drawing had previously taken 19.0 minutes between doffs, it now would run 20.5 minutes between doff times. If this drawing was fed into roving frames which creeled at 9.0 hour intervals, the creeling would now take place at 9.7 hour intervals. The result is increased efficiency at each point without sacrifice to anything and at only the small cost of an ordinary spur gear which can be made in practically any mill machine shop.

#### COILS PER LAYER CALCULATIONS

For 12-tooth gear (marked "change")

$$\frac{60}{8} \times \frac{36}{12} \times \frac{40}{12} \times \frac{16}{16} \times \frac{33}{100} = 25 \text{ coils per layer}$$

For 9-tooth gear (marked "change")

$$\frac{60}{8} \times \frac{36}{9} \times \frac{40}{12} \times \frac{16}{16} \times \frac{33}{100} = 33 \text{ coils per layer}$$

To make any increase in card doffing cycle, all the cards must be tested and standardized as to coils per layer. We are not discounting, here, the importance of the proper alignment and leveling of the coiled head and can table. Rather, we point these features out as being strictly a matter of mechanical correctness and not within the scope of this writing.

Additional increased package size may be derived from the drawing by the standardization of the distance from the can table to the bottom of the tube gear. The relative puffiness of the stock being processed is the determining factor in the case of the height of the tube gear. If, when the can is doffed from the frame, the sliver puffs up and falls out of the can, it is obvious the distance is too great. The optimum height should be found and all frames stand-

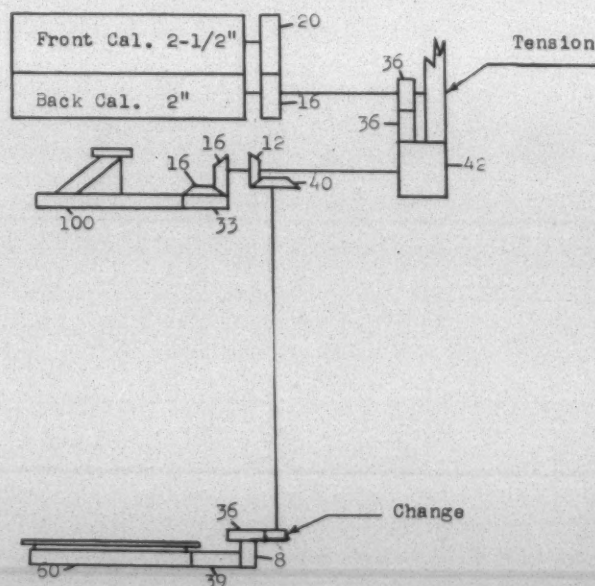


Fig. 1.—This diagram shows the gearing which controls the number of coils per layer on the conventional drawing frame. The gear marked, "change," is easiest to alter when increasing the coils per layer.



## OPENING, PICKING, CARDING & SPINNING

ardized. Standardization is necessary so that the drawing from several frames will run out of the roving frame creel at the same time. Thus, piecings may be reduced thereby making for better quality roving.

As in the case of the cards, we do not discount the importance of the proper alignment and leveling of the drawing frame. These features are, again, pointed up as being strictly a matter of mechanical correctness.

### Troubleshooting on Cards

A systematic control over cards by use of an electronic evenness tester has value which cannot be overstated. Unevenness introduced to the sliver at the card is one of the major contributors to the necessity for doublings in subsequent operations. These doublings cannot possibly be reduced, with any degree of success, unless close control over short-term sliver uniformity is achieved. A successful method used to control short-term variations in card sliver is outlined in the following paragraphs.

The first requirement for controlling sliver short-term variation is an aggressive testing procedure. This aggressive testing procedure is one which actively pursues each card and demands quick corrective action when adverse conditions are detected. The rugged, "do something, even if it's wrong," school fits in well here. As many people know, a card can be a mysterious piece of equipment at times. A spirit which is kindred to doggedness is required of the tester and the card room supervisor.

As the card grinder starts up a card after grinding and setting, he either reports the card number or delivers a sample of card sliver to the person charged with testing. This procedure is easily incorporated with the report of starting up a card after grinding for nep counting as was discussed in Part Three of this series (TEXTILE BULLETIN, October 1956). The tester is thus supplied with a relatively small number of samplings per day and yet is assured of receiving samplings from every card within a relatively short period of time. The tester, or laboratory man, may now run the sample of the electronic evenness tester, making both a determination of regularity and a chart showing the variations graphically.

Should the test be run and a defect which is repetitious in nature become noticeable, the laboratory man must determine what general area of the card contained the probable cause for the defect. And, if possible, the laboratory man should recommend the probable cure. If the reader gets the opinion the writer is hedging, he is correct. This hedging is somewhat justified by the fact that in many cases periodicity in cards may have multiple causes.

The defective cards should be reported to the card room supervisor at once. A convenient form for this report is shown above. This form is used at Buck Creek Cotton Mills, Siluria, Ala., and was worked out in conjunction with the Uster Corp. Buck Creek has a comprehensive quality control program as installed by Werner Textile Consultants and uses the off-standard reporting system. This form, however, precedes the off-standard report. The off-standard report is not used so long as all efforts are directed at the defective card and some progress is noted toward the correction to the defect.

### ROUTINE FOLLOW-UP ON USTER TESTER RESULTS

Material Tested _____	Date Of Test _____
Machine _____ No. _____	Tester Operator _____
Delivery or Bobbin No. _____	Count _____
Tests Results _____ % C.V.	Control Limit _____ % C.V.

Probable Source of Defect: \_\_\_\_\_

Report on Probable Source by Overseer: \_\_\_\_\_

Overseer \_\_\_\_\_

Re-Check Results: \_\_\_\_\_

Quality Control Supervisor \_\_\_\_\_

Generally speaking, periodic card defects fall into two classifications: (1) coiler defects and (2) doffer defects. The coiler defects are 22 inches or less in length. The doffer defects are approximately 85 to 90 inches in length. This distance is found by multiplying the doffer diameter plus .25 inches (for clothing) times pi (3.14) and multiplying the result by the draft from the bottom calender roll to the coiler calender roll. The length of the coiler defects is found by multiplying the diameter of the bottom calender roll times pi and multiplying the result by the draft from the bottom calender roll to the coiler calender roll. The distances stated here are pegged on drafts normally found in conventional cards which are drafting a 16 ounce-per-yard lap to a 55 grain-per-yard sliver.

A defect which is caused on the doffer or by the doffer may come up at 45-inch intervals, that is, if the doffer is 90 inches in circumference (multiplied by the subsequent draft). The cause for this defect is something which happens twice for each revolution of the doffer. Or, the doffer defect could possibly come up at 180-inch intervals. The cause would thus be found as something which happens once during each two revolutions of the doffer.

Similarly, slipping or binding in the lap roll (six-inch diameter) would cause a defect with a repeat every:  $6 \times 3.1416 \times 110 = 2073.5$  inches or 57.6 yards of material. If the graph paper speed is four inches per minute and the material speed is eight yards per minute, the defect would repeat at 28.8-inch intervals on the graph. At times, these defects can become fairly difficult to spot and, thus, is seen the need for doggedness in testing. These defects, once spotted, can be equally difficult to correct.



# Clemson Plays Host To S. T. A.

SOME 268 persons attended the Fall meeting of the South Carolina Division of the Southern Textile Association held Nov. 3 at the Clemson House, Clemson, S. C. Highlights of the meeting were:

(1) A brief report on the quality of the early season 1956 cotton crop.

(2) Reports on three opening systems currently available on the market.

(3) A report on anti-friction top-drive spindles for both warp and filling spinning operations.

The meeting opened with welcoming remarks by Dr. R. F. Poole, president of Clemson College, and Dr. Hugh M. Brown, dean of the Clemson Textile School. Presiding at the meeting was Joe N. Jenkins, chairman of the South Carolina Division of the S.T.A., and superintendent of the Lower Plant, Kendall Cotton Mills, Pelzer, S. C.

## New Crop Cotton

**J. MURPHY  
COOK**

Director  
U.S.D.A. Laboratory  
Clemson, S. C.



AS has been the case with the cottons that were picked in the dry sections in 1954 and 1955, this year's early cotton was unusually dry at the first of the season. In processing there has been more fly present than average. This appears to be due to fiber breakage during processing more than to short fibers present in the cotton. The excessive fly is shown by more than average fiber on the card front, in the air around the card, and on and around the other machines. A large amount of fiber is also shown in the picker and card motes.

A partial remedy for this is to use moisture or humidity in the opening room, or raise the humidity in the picker room. A humidity as high as 55 per cent will not hurt you in your cleaning. Another way to help this is to mix some of an old crop with the new cotton. There has been a large supply of the 1953 crop made available and this has helped a great deal when it was mixed with the new, although generally speaking, the 1953 crop runs good alone.

The classification results on the samples selected for spinning tests, which represented the predominating grade and staple for the particular gin area at the time the lots were made up, showed approximately the same lengths on the average as last year's first pickings, although North Carolina

was slightly longer, as was Mississippi, while Georgia was slightly shorter. This should not be accepted as significant for the whole crop because of the over-all averages used. A number of classers have stated that this year's cotton was slightly shorter than last year's.

Fiber strengths are consistently stronger across the Belt for the early season samples than the 1955 crop. They are also stronger for the midseason samples that we have tested. On the basis of fiber strength, the 1956 cotton from the early season harvestings should produce stronger yarns than the early harvestings of the 1955.

Yarn appearance is slightly lower, on the average, for cottons of early pickings this year than those from early season last year. Only those samples from South Carolina and Mississippi gave yarns with as high or higher grades than last year's. The differences varied from two index points to as much as 12, or a full half-grade. This indicates a neppier and a more difficult cotton to process into quality yarns. Probably many of you have noted this difference in the new cotton.

The early cottons this year are producing stronger yarns than last year's did. Only Alabama, Tennessee and Missouri are slightly weaker. The Alabama and Tennessee cottons last year gave very strong yarns, and there is but a slight drop in the level for this year. The crop as a whole is a very good one for producing strong yarns according to indications from early season results.

I believe that this cotton will be considered an outstanding one for quality after it has been stored for eight months or more.

## The S. R. R. L. Opener

**JOE L.  
DELANY**

General Superintendent  
Joanna Cotton Mills  
Joanna, S. C.



AT Joanna we became interested in this saw-type opener about five years ago, when we were confronted with a particularly tough job of opening. In our waste mix we had been attempting to run some "washed rayon" waste. This is tinted rayon which has been washed, dried and baled into an extremely hard-packed bale. This material had an attractive price and blended well into our waste mix. We wanted



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very much to run it but could do so only by passing it twice through our openers and pickers, and we usually ruined some of the lags on the pickers on the first run. That caused so many time delays that we were just about ready to abandon this stock.

Hearing about the Centennial S.R.R.L. machine, we arranged with Big Swift (Swift Mfg. Co.) in Columbus, Ga., to run a trial for us. A large 75-pound slab of washed rayon was put in the back of our car and taken to Columbus. There it was passed through the S.R.R.L. unit with no difficulty at all. It was opened so well that we were unable to pack it all back into the car but had to get the Swift people to ship it back to us in a box-car.

We were really amazed to see the way in which the stubborn rayon passed through the S.R.R.L. There was none of the usual shuddering, lumps, no overloaded belts squealing on the pulleys, no sound of airplane motors taking off, but just a quiet hum, and zip! the stock was opened.

Three weeks later we had our own unit in full operation at Joanna. Needless to say, we had no trouble handling any hard-packed stock of any kind. There were some initial difficulties. One was the overfeeding of the delivery unit by the feeder saw unit. This made several choke-ups, which were eliminated by speeding up the fan in the condenser delivery section.

We had several fires in the saw section, caused by waste wrapping around the wooden spacers between the saw cylinder and the machine side. We took out the wood spacers and, with some help from the Centennial people, were able to eliminate fires. Centennial has also since supplied a device which automatically shuts off the feed belt in the feed section at any time the suction, taking the stock from the machine, is cut off or the delivery line becomes plugged. This does a great deal in prolonging the life of the saws.

Our carding overseer kept after us to put one of these units in our white line, and we finally did this.

We are convinced that the purpose of an opening line is to blend and open the stock, to reduce it from the bale to the small tuft necessary for the picker. We also felt that there is no opening process which does not to some degree injure or damage the fibers. It is an axiom that the more cotton is beaten the cleaner it becomes. It is also true that an overworked cotton produces an inferior yarn. For this reason we decided to do away entirely with everything in our waste line with the exception of the opener-blenders and the Centennial unit. We have been on this set-up for several years now and to date have had no reason for deviating from this position.

Neps at the card are a good index of cotton quality; and we have unfailingly proven that cotton carded directly from the bale, and not passed through the opening line or the pickers, will always come up with less than one-half the usual amount of neps per grain in the card sliver. This holds true on any line of openers or pickers.

Shortly after installing our first S.R.R.L. unit we were visited by a group of Englishmen who asked to take samples of the stock before and after passing through our Centennial machine. We were glad to have them do this, and they actually took at least ten pounds of the stock from the feed table and another ten pounds from our delivery side in the picker room. These samples were turned over to the scientists at the world-famous Shirley Institute, who pro-

ceeded to run a full-scale fiber and spinning test. Their results confirmed those of our own laboratory checks in that there was no noticeable fiber damage or evidence of nep-forming elements in the machine. There was no cleaning at all, nor did the manufacturers make any claim for this. The Shirley Institute gave it a clean bill of health.

We have four of the larger Centennial units running in our opening lines, plus a Centennial Junior Opener in our special high-density-cotton opening line. We found that conventional openers would not satisfactorily open the high-density bales of extra-long-staple cotton and switched to the Centennial, with gratifying results.

In general, we try to do the very best possible job of opening the stock in our openers to prepare it for the pickers. We continue the opening of the blended stock at the pickers, where we remove the larger and heavier particles of waste. With a well-opened stock the card, which is the most efficient cleaning machine in the mill, can then perform its task adequately, turning out a sliver of high quality.

## Whitin Axi-Feed, Axi-Flo Openers

**J. HARVEY  
CLEVELAND**

Superintendent  
Easley Plant  
Woodside Mills  
Easley, S. C.



**A**BOUT a year and a half ago, one of the steps that Woodside Mills took to improve the quality of its cloth was to install the Whitin Axi-Flo and Axi-Feed cleaning unit in the opening room. We feel that these machines are very simple and very efficient.

In the opening room we had two lines of opening equipment. They consisted of No. 7 Saco-Lowell hoppers, conveyor, Eriez Magnet, and two No. 11 and two No. 12 Saco-Lowell machines.

Our cotton in this opening room is  $1\frac{1}{16}$ -inch and is an average of Strict Low Bright. It has a lot of pepper trash and large leaf. Some of our cotton is Middling and better, but it still has a lot of pepper trash, so our average is Strict Low Bright. The production is 1,600 pounds per hour per line; 200 pounds per hour per hopper.

The reason for the installation of the Axi-Feed and Axi-Flo was that we feed our mix usually immediately after we put it down and do not have any blooming effect. That is not true all the time, but it is most of the time. We felt that if we could get better opening we could do a better job, and we also felt that installing the Axi-Flo and Axi-



Feed to replace our vertical openers would give us better opening.

The Axi-Feed machine is easy to install; it goes right over the hoppers. It is easy to maintain and easy to set. It just takes a matter of minutes.

The results we found from the Axi-Feed were that it removed a big quantity of dust—much more than we had been getting out with our previous system—and it opened the cotton better. It also gave us another beater and another grid-bar section, which probably doubled the droppings under the No. 7 hopper.

The Axi-Flo replaced a vertical in our line. The results are satisfactory. The Axi-Flo is a machine that is easy to set and that requires practically no maintenance. It occupies the same amount of space as the vertical. It has about four points on it, and you can take out as much as you want or as little as you want, depending on your stock. The cotton was opened better, opened in smaller tufts, and allowed the other machines to do a better job. We had most of our settings pretty wide open, and with those settings pretty wide open we got about 30 per cent more droppings. Those droppings were free of long fibers. On the Axi-Flo these droppings were mostly leaf, sand, dirt—things you want to get out of your cotton.

The motes increased 0.5 per cent, or 2,000 pounds per month. Our card sweeps fell off some, and so did our strips. So we felt the Axi-Flo was doing a better job.

Another thing, we felt were taking out motes that formerly we were taking out in the card room; we were taking them out in the opening room, where we wanted to do it.

To summarize, the Axi-Feed and Axi-Flo cleaned the cotton better in the opening room, as I have just said, instead of in the card room. We feel that our laps are certainly better. The toppings are better, there is less dust, the neps are down some, and the cloth is definitely better.

As I said in the beginning, this is one step the mill took to improve the quality of our cloth. And we feel that the installation cost of the Axi-Feed and the Axi-Flo was more than justified.

## Saco-Lowell No. 15 and No. 16 Openers

**ROBERT  
A.  
LINER**

Superintendent  
Greenwood Plant  
Greenwood Mills  
Greenwood, S. C.



**I**T is very obvious, from the increased cost of cotton, that the mill is going to have to seek out better methods of

cleaning this cotton. Of course, each mill has to work out its own method according to the kind of stock and the quality of the product required in the end.

I have been asked to talk on Saco-Lowell openers No. 15 and No. 16, and for those not familiar with this type of openers I will review briefly their main features. The No. 15 opener is a machine that is attached to the delivery end of a No. 7 feeder, and incorporated with it is a 16-inch Buckley-type beater which has adjustable grid bars underneath.

In place of a standard belt conveyor, a pneumatic conveyor is used to carry stock to the No. 16 opener. The No. 16 is much larger. It has a No. 11 condensor or dust extractor incorporated with it which furnishes the air to bring the stock to the No. 16 by way of a reserve box. The stock is deposited on a feed apron which in turn goes through feed rolls to the opening and cleaning chamber. This chamber has a Kirschner or carding-type beater. Underneath this beater there are a fringe roll, two mote knives and two revolving grids.

These, along with the air flows and whatnot, constitute the important features or mechanical characteristics of the No. 15 and the No. 16 openers. There are, however, different arrangements of placement of this machine in the opening line. In our case, at the Greenwood Mill, we have done away with one No. 12 opener, a vertical opener, and use a No. 15 and No. 16 in place of it.

We have the No. 7 feeding to the No. 16. I understand from the manufacturers that the No. 15s do not have to be primarily at the No. 16, but that there can be deviations you can make. For the best results, however, I believe you should have the No. 7 feeding to the No. 16.

Although this machine is primarily an opener, there are various cleaning points, the first being under the doffer of the No. 7 feeder. A lot of pepper trash can be gotten out at this point. Under this feeder there is a steel grid bar or cleaning trunk. Then the stock goes to the No. 7 Buckley beater, where it is opened and a goodly portion of motes, etc., taken out.

Instead of having a belt conveyor, which is the standard type of conveyor, there is a pneumatic conveyor to carry the stock to the No. 16 opener. It is pulled by air from the No. 7 to the No. 16, so in our case we have no mechanical difficulties about conveying stock.

The next cleaning point is the No. 16 itself, under the Kirschner beater. That machine, of course, is primarily an opener, and we have been able to get out additional amounts of motes, leaf and trash. From there it goes to the No. 7 picker.

We have been able to get out more droppings, percentage-wise, from the one No. 12 we have in our line, we think, because of the previous opening on the No. 7 and the No. 16 openers. We have run a test at Greenwood, using a Strict Low Middling and a Middling cotton, with no deviations whatsoever on the machinery, to see what the results would be, and have found we have gotten more droppings. For example, just in round figures let me quote you the difference. Through the opening and picking equipment there was a difference of about one per cent from the Strict Low Middling versus Middling cotton, meaning that we were able to take out more and, we think, do a better job of opening in this particular case with the Strict Low Middling than with the Middling, which was indicated by the amount of take-outs or droppings we were able to de-



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rive. On the cards there was a difference of 0.25 per cent in favor of the Strict Low Middling. We found there was not a great deal of difference in the breaking strength or skein break, and there was not a great deal of difference in uniformity on test. We noticed no difference in quality, running two grades lower cotton stock.

I would also like to cite this point. We have some Saco-Loewell representatives here, and it might give them a lead. We had a choke in our No. 16 opener. On the fringe roll of the No. 16 opener there was a choke, which is common to all types of opening equipment. Occasionally they all have chokes. It pulled all the wire off the fringe roll. Until the new wire got there, we had to run without wire on the fringe roll, and since that time our nep count has dropped 25 per cent. That might give you a lead.

## Top Drive Spinning Spindles

W. B.  
ETTERS

Engineer  
Fairforest Division  
Reeves Bros. Inc.  
Spartanburg, S. C.



ALL of the better suppliers of spinning spindles are presently prepared to furnish interested mill men with complete details of spindle requirements, price and delivery for top drive spindles for both warp and filling spinning operations. The most readily made claims for justification of this type of spindle, as compared to the conventional clutch or cone type are:

- (1) Increases of up to 20 per cent in spindle speed.
- (2) Ten per cent more yarn per bobbin.
- (3) Less spindle vibration, resulting in
- (4) A better-wound package.
- (5) Improvement in spinning production and quality.

The increase in spindle speed when utilizing top-driven spindles is made possible by the fact that a top-driven bobbin can more accurately find its center of rotation. This more accurate centering of the speeding bobbin results in a truer, more steady running condition, which tends to minimize or eliminate irregularities in traveler motion, provides more uniform yarn tension and thereby creates a measure of control in variation; providing thereby for increased traveler speeds, which are prerequisite to higher front-roll speeds and increases in spinning pounds per spindle hour.

In addition to increased speed and production by application of top-drive spindles, there is the significant advan-

tage, proven by many of our better mills, of approximately ten per cent more yarn per bobbin. Increase in spindle speed exerts a corresponding influence on the balloon and wind resistance. This minor increase in tension, in conjunction with a smooth, vibration-free running characteristic of the spindle and bobbin, packs the yarn tighter, resulting in the increase in yarn yardage previously mentioned.

Of course, increase in spinning production per spindle hour affords a lower spinning cost per pound or unit. More yarn per bobbin results in fewer bobbins used per loom in weaving a yard of fabric, fewer bobbins to be handled by service people, less transferring of filling by the loom, less stripping of quills, etc. An increase of ten per cent more yards per quill will certainly justify a direct assignment increase of equal amount to battery tenders. Thus a plant whose battery tenders are currently handling 600 quills per hour should expect an increase to 660 quills per hour with the increased yarn package.

For those plants which plan to continue direct spinning of filling yarn, we are confident that an evaluation of the economies and benefits possible will effect cost reduction in sufficient volume to interest top management in a program of conversion to top-driven-spindle spinning.

We are advised by our friends who have made the conversion from conventional to top-drive that the successful installation and conversion project requires a realistic selling and training program for the spinning room personnel from supervision to traveler changers. When you begin a change-over job give yourself an even chance and begin by proper methods in utilizing this better tool.

**WAK**

## HANK CLOCKS

Are

Rugged—Accurate—Dependable

WE BUILD—

Single—Double—Triple

PICK COUNTERS

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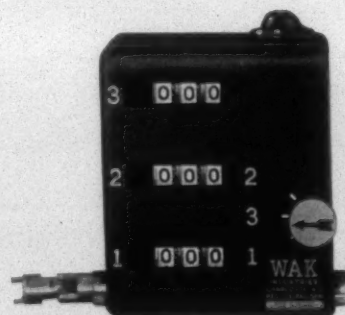
YARDAGE COUNTERS

ROTARY COUNTERS

PICKER COUNTERS

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OVER 500 MILLS IN UNITED STATES and Foreign Countries  
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**WAK  
INDUSTRIES**

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P. O. BOX 3095

CHARLOTTE, NORTH CAROLINA



# *Warp Preparation & Weaving*

## **A Study in Loom Fixing**

By FRANK D. HERRING (Part II)

**A** LOOM FIXER is given a designated number of looms to maintain and keep in operation. We refer to this designated number of looms as a loom fixer's section. The number of looms on a section will vary according to the model of the looms and the fabrics being woven. The loom fixer is held responsible for the maintenance and upkeep of his section of looms. It is the supervisor's or overseer's responsibility to determine the number of looms assigned to each loom fixer's section.

There are three types of loom fixers in every mill—inferior, average and superior—and the products delivered from the sections of these three types of fixers will bear out the fact of this statement. Over an extended period of time it will always be learned that more inferior quality cloth will come from the inferior fixer's sections, and also the maintenance cost will be higher on these sections. Under average conditions the supervisor is compelled to decide on the allotment of looms to each fixer's section in accordance to the number of looms that the average fixer is capable of attending to properly, and, of course, this creates a condition that could not be considered too favorable because the inferior fixer must struggle continuously to try to keep up with his work, while the superior fixer will have considerable spare time on his hands.

A loom fixer should have some time away from fighting flagged looms because he needs to check over his looms while they are in operation. This will enable him to spot some parts of the loom which are not functioning properly and he can attend to them before they develop into breakdowns. Preventive loom fixing is good loom fixing, because it enables the fixer to stay ahead of his job. If the fixer never gets the flags down on his section and never has time to check over his job, it is an indication that he either is not a good fixer or he has more looms allotted to him than he should have. In either event, efficiency goes down and cost goes up.

The supervisor should never be content with average conditions, especially where loom fixers are concerned. He should strive continuously to train his fixers in such a way as to lift them above the average. This can be done by giving them the necessary basic training and teaching and leading them into the procedures of routine checking and preventive loom fixing. Of course, it is best to give the loom fixer his basic training at the beginning of his trainee period, but if he does not get it at this time, there is no reason why it should not be given to him at a later date.

The basic training consists of building the loom from the floor up and applying and adjusting each and every part of the complete loom assembly and learning the functional duties of each part, independently and in conjunction with other parts. The trainee should then learn to put the shuttle

in the loom, box it, run the loom without a warp on it, and then tie a warp on the loom and put it in operation.

The trainee should be allowed to do all the work in his basic training under the guidance of a competent teacher. The teacher should take nothing for granted during this period of the trainee's indoctrination, but should take the time to explain in infinite detail every part of the loom building and starting procedure. All this requires time and patience on the part of both teacher and trainee, but if this part of the job is done right, the benefits will be highly rewarding for years to come.

Before a man can be classed as a good loom fixer he must know all the things prescribed in the basic training procedure. If he is put on a section of looms before he learns these things, the chances are that he will never learn them, but will always do hit-or-miss guesswork loom fixing, the type that pays no dividends. Routine checking and preventive loom fixing is absolutely essential to good loom fixing, and unless a loom fixer has had the proper basic training he cannot clearly understand the vital importance of these things.

This article deals primarily with routine checking and preventive loom fixing, and is designed to help the loom fixers who were not given the proper basic training. And very few of the present-day fixers have had the benefit of such training. The items listed below should be checked in the order listed. By checking them in order the fixer will save time, and also continued orderly checking will cause it to become an automatic routine procedure with him. If any of the items listed are not functioning properly, the loom can be stopped off and minor adjustments can usually be made in a matter of a few seconds.

- The parallel assembly, both ends of loom.
- The pick arm and pick shaft, both ends of loom.
- The lug strap, both ends of loom.
- The check strap assembly, both ends of loom.
- The lay end straps, both ends of loom.
- Harness setting, both ends of loom.
- The temples, both ends of loom.
- The tension on the cloth.
- Shuttle boxing, both ends of loom.
- Ejected bobbins in bobbin can.
- The filling fork.

Usually, when the average fixer checks over his looms he will check shuttle boxing first, and as a rule he will check nothing else. This is a mistake, because the items mentioned above for checking before shuttle boxing can have a direct effect on the boxing of the shuttle.

The parallel assembly consists of several parts, and if any of these parts are loose, broken or excessively worn it can affect the boxing of the shuttle. If some of these parts are allowed to continue running loose very long it can cause irreparable damage to parts of the assembly. In this



event, replacements become necessary, requiring time and taking the loom out of production. The pick arms and pick shaft boxes should be properly adjusted and tight at all times. If they are not it will affect the boxing of the shuttle and create excessive wear on a number of parts.

The lug straps are mediums of transmission of power from the pick cam to the picker stick. Working in conjunction with a number of other parts they directly affect the throw of the shuttle from end to end of the lay, and it is vitally important that they be in good condition, all parts tight and properly positioned at all times. If any parts of the lug strap assembly are loose or improperly adjusted, it will decrease the power on the pick and cause the loom to slam off occasionally. The lug straps are held in position on the picker stick by the power strap (power blocks on some looms), and it is vitally important that these straps or blocks be properly positioned on the picker stick. If they are positioned too high on the stick it will reduce the power on the pick and cause the loom to slam off. If they are too low on the stick it will create a harsh heavy pick, and this also will cause the loom to slam off. It also will sometimes throw the shuttle out of the loom.

The proper adjustment for this setting is to fasten the power strap, or block, to the picker stick at a point where the lug strap will incline upward slightly from the pick arm back to the picker stick. This setting should put the lug strap in level position when the picker stick is at its extreme forward motion on the pick. It is also important that the lug strap be adjusted to a point where the shuttle will be drawn clear of the friction hold of the binders on the pick. If the lug straps are adjusted to draw the picker stick too far forward on the pick it will create excessive wear on parts of the parallel assembly, the lug strap assembly and the check strap assembly, and will also cause the shuttle to be thrown out of the loom occasionally.

The check strap assembly, like many other parts and motions of the loom, is vitally important to the proper operation of the loom. The check strap is an expensive part, and the life of it can be greatly prolonged if it is checked and kept properly adjusted. And, of course, proper adjustment of the check strap is necessary to the proper boxing of the shuttle, and proper boxing of the shuttle is just about the most important part of the loom fixer's responsibilities. The check strap adjustable friction bracket and the check strap holders are attached to the lay, and under continued operation they will sometimes work loose. If they are allowed to run very long in this condition it will cause irreparable damage to the lay. The lay is a very costly part and it requires several hours' work to replace it.

Too many fixers never pay any attention to the lay end straps, but they can save themselves a lot of unnecessary work and replacement of worn and broken parts by checking them and keeping them in place and in good condition. The lay end straps act as a cushion for the picker stick and prevent impact of the picker stick and the iron lay end piece. If the strap is excessively worn or out of place, it will create wear on the picker stick and make it necessary to replace it.

Efficient operation of the loom is absolutely dependent on good harness setting. When checking over the looms, the fixer can check the setting of the harness without stopping

the loom. To do this he should look at the warp yarn sheds at the selvages on both ends of the loom. He should check both the top and bottom sheds of the yarn to determine if the sheds are opening properly. The sheds should open wide enough to give complete clearance to the shuttle on its passage across the lay. The bottom sheds should just clear the race plate when the lay is on back center, because the shuttle passes over the bottom shed of yarn, and if the sheds are too high in relation to the race plate it will cause the shuttle to rise when it enters the shuttle box, and this will prevent the shuttle from boxing properly. If the top sheds of yarn are too slack, or sag down when the lay is on back center, it will cause the shuttle to be thrown out of the loom sometimes by the shuttle riding out through the warp yarn. And also this slack top shed yarn will cause excessive warp yarn breakage while the loom is in operation, and will also cause overshots to be made in the cloth by allowing the shuttle to ride over parts of the yarn in the top sheds. When weaving two-harness goods there is always one harness up and one down when the shuttle passes through, but when more than two harnesses are used they are usually set up so that one shed will be down and the balance up when the shuttle passes. In this event it is very important to see that all of the yarn in the top sheds are even in relation to each other when they are in top position. If one or more of the sheds are slack and sag down it will make overshots and also cause the shuttle to be thrown out of the loom occasionally.

The temples should be checked to determine if they are adjusted properly in relation to the selvages, and to determine if they are in good condition and also set properly in relation to the race plate. If they are too low in relation to the race plate it will cause the plate to be irreparably damaged in a very short time, and replacing the race plate is a time consuming job.

### Proper Tension

Keeping the proper tension on the cloth is vitally important for a number of reasons. If the tension is too slack or too tight it will adversely affect the face on the cloth and will destroy the feel of the fabric. Also if the tension is too tight it will prevent free passage of the shuttle and cause the loom to slam off occasionally. When the fixer checks the tension on the cloth he can determine if the take-up and let-off motions are functioning properly. If either of these motions are not functioning uniformly he can detect it by feeling and looking at the cloth. If both of these motions do not function properly when the loom is in operation, the cloth will have to be classed as seconds. To detect imperfections of this type requires inspection by the loom fixer, or other trained personnel, because the weaver might pass the loom several times a day and never detect it.

As previously stated, shuttle boxing is just about the most important factor in loom fixing. There are so many things which can adversely affect the boxing of the shuttle, that if the fixer will check over his looms often enough to keep these many things functioning properly, he will have no trouble keeping ahead on his job. Many things can affect the boxing of the shuttle, and if the shuttle does not box properly this also can have an adverse affect on many other important functions of the loom. If the shuttle fails to box properly on the battery end it can cause faulty trans-





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fers of the bobbins from the battery into the shuttle. This can materialize into many other troubles—broken bobbins, broken shuttle and box plates, and bobbin breakouts in the warp sheds. If the shuttle fails to box properly on the shipper end of the loom it will interfere with the functioning of the filling feeler and cause all of the filling yarn to be run off of the bobbin. This will very often cause mispicks. And if the shuttle does not box properly in both of the shuttle boxes the loom will slam off occasionally. There are other things improper boxing of the shuttle can cause, but enough things have been named to make one realize the prime importance of this part of the fixer's job.

While checking his looms the fixer should always look to see if there are any empty filling bobbins in the bobbin can. If there are empty bobbins in the can, it is positive proof that the filling feeler is not functioning properly, because

the bobbins should be ejected from the shuttle before all of the yarn is depleted from the bobbin. If they are not, mispicks will result.

When the shuttle is in the shuttle box on the shipper end of the loom, the strand of filling from the shuttle will extend across in front of the filling fork grate and make contact with the filling fork prongs and prevent the loom from being stopped off from the filling motion, because this operation raises the filling fork prong loop and allows it to clear the filling motion hook. When the shuttle is in the box on the battery end of the loom there is no strand of filling in front of the grate to raise the fork prongs, and the filling fork prong loop should lay dormant. If the fork prong loop is being raised when the shuttle is in the battery end box, it is an indication that the fork prongs are not properly lined up with the filling fork grate. The fixer can detect this without stopping the loom. If the loom is allowed to operate in this condition, mispicks and thin places in the cloth will result.

## Standard Efficiency Computations

By THOMAS F. O'CONNOR, A.S.M.E.

**Mr. O'Connor, who headquarters in the Calhoun Towers at Greenville, S. C., is an industrial engineering consultant to the textile industry.**

**A**MONG the problems of the textile industry, none has been more stubborn than that the industrial engineer has had to face in making a just allowance for inevitable machine interference. Here is the problem in brief.

A loom is a good example of the type of machine we have in mind. It is tended by a weaver, who, after it is loaded, starts it running and producing. It has to run for a known time to produce a unit of manufacture, say a certain length of cloth, but during that run it is subject to random stops. These may be due to breaks in the warp or filling, or to mechanical troubles, or may be voluntary stops for adjustments, or there may be other reasons. Whatever they may be, the weaver has to put things right and restart the loom. Each stop absorbs a certain time, which may be measured by time study, and thus the total attention time on stops during the cycle of production of the stated unit is found. Now since this is usually considerably less than the required machine running time, if the weaver had only one machine to look after he would be idle for long periods. So it is customary, as is well known, to assign several looms of this type to one weaver, and under these conditions—several looms, random stops—arises the liability to the loss known as interference, caused by overlapping loom stoppages.

It arises in the following manner. Although on some of the occasions when a loom stops, it may be fortunate enough, so to speak, to find the weaver disengaged, so that it receives immediate attention and no loss of time occurs, on others it may be unlucky. It may find the weaver with his hands already full of trouble on another loom. There may even be other looms stopped and waiting, ahead of the

one we are speaking of. Thus there will be waiting and loss of production on such occasions, the loss depending on the particular circumstances. Interference may be defined as the average amount of the loss over a number of cycles of production. It is the question of assessing the magnitude of this average loss which has been for many years the engineer's big problem. He needs to know in order to set realistic productivity standards on his company's manufactures. These standards are indispensable for a management which aspires to have adequate control of its operations. It will use them in many ways—wage payment, costing, production planning, price estimating, budgeting, statistical work and so forth; in short in all the ways which distinguish a plant managed on scientific principles from one managed by rule of thumb.

It has been established that direct measurement of interference by stopwatch has no value. Any measurement obtained would apply only to the exact set of circumstances and the exact operation of lady luck prevailing at the time of the measurement. Hence a mathematical or statistical over many years, but it fell to the lot of myself, no mathematician as it happens, to be instrumental in finding the solution, and this I did simply by introducing the problem and its solver-to-be to one another. The solver was Henry Ashcroft (M.A. of Oxford) and he had no interest in the problem other than as an intriguing mathematical puzzle. His formula is the basis of tables of the residual productivity factor, symbol *A*, worked out by myself later, and extended to cover all the conditions and assignments ever likely to be encountered. The factor *A* is an index, not of interference, but of the more useful statistic residual productivity, that is to say the productivity to be expected after attention time and interference have taken their toll. If it is necessary to know the amount of the loss due to interference, it can be readily calculated from *A*, as will be shown.

Since one picture is worth much talk, here is a fragment



of the tables and an example of the calculations. The factor  $p$  is the amount of weaver time on stops per hour of machine run achieved, and  $N$  is the number of looms in the assignment.

N	Cycle ratio, $p$		
	.006	.007	.008
120	117.730	116.191	113.198
121	118.672	117.060	113.891
122	119.611	117.922	114.568
123	120.549	118.778	115.227
124	121.484	119.627	115.868
125	122.418	120.469	116.490

As an example, if  $p$  is .008 (found by time studies), and  $N$  is 125,  $A$  is seen to be 116.490. Standard efficiency is  $A$

divided by  $N$ , in this case 116.490 divided by 125, that is 93.2 per cent. The weaver's workload is  $p \times A$ , in this case  $.008 \times 116.490$ , that is again by coincidence 93.2 per cent. The cycle time, symbol  $H$ , is the time required for each loom to complete 60 minutes run, and is given by  $H = N \times T \div A$ .  $T$  is the run time, 60 minutes. Therefore  $H = 125 \times 60 \div 116.490 = 64.40$ . (Notice that 60 divided by  $H$  also gives the efficiency, 93.2 per cent).

If we should want to know just what is being lost by interference, it is simply the difference between  $H$  and the sum of  $T$  and  $t$ , where  $t$  is the weaver's work time corresponding to 60 minutes machine run, that is .008 hour or .48 minute.  $T + t = 60.48$ , and the difference is 3.92. Interference waiting time loses nearly eight times as much production for the manager, under these conditions, as the actual work on stops.

## Specialized Construction In Clinton Weave Room

**T**YPICAL of what has been accomplished in textile mill weather control is exemplified at the Clinton (S. C.) Cotton Mills, where a new weave room with some 1,300 looms was placed in production. Clinton Cotton Mills is observing its 60th anniversary this year as a producer of high quality print cloths, twills and broadcloths.

Optimum operating efficiencies can be obtained in the weave room if temperature can be maintained between 80 and 85° F., with the relative humidity maintained at a pre-determined percentage ranging between 80 and 85. Under these conditions breakage of the warp and filling yarns as they pass through the loom is held to a minimum and static electricity is practically eliminated.

Clinton's 1,300 looms in the new plant area have a rated

capacity of 165 and 185 picks per minute. Operating schedules are on a 24-hour day, six-day week. Proper control of humidity and temperature aid in holding the breakage of threads with resultant loom stop to a minimum. The quality of the fabric and the mechanical operation of the looms are also benefited.

One problem that arises from the maintenance of this high humidity is the possibility of damaging condensation on the walls and ceilings of the weave room. To overcome this, the new weave room, a one-story addition to the company's original thick-walled multi-story plant, is constructed with walls consisting of a two-inch layer of cellular glass insulation installed between the outside face brick and a glazed tile interior wall. This Foamglas insulating



An aerial view of the Clinton (S. C.) Cotton Mills shows at the right a new 121,000 square-foot addition to the 60-year-old plant. Foamglas, a cellular glass insulating material produced by Pittsburgh Corning Corp., was used in the walls and roof of the new weave room to control temperature and humidity without damaging condensation.



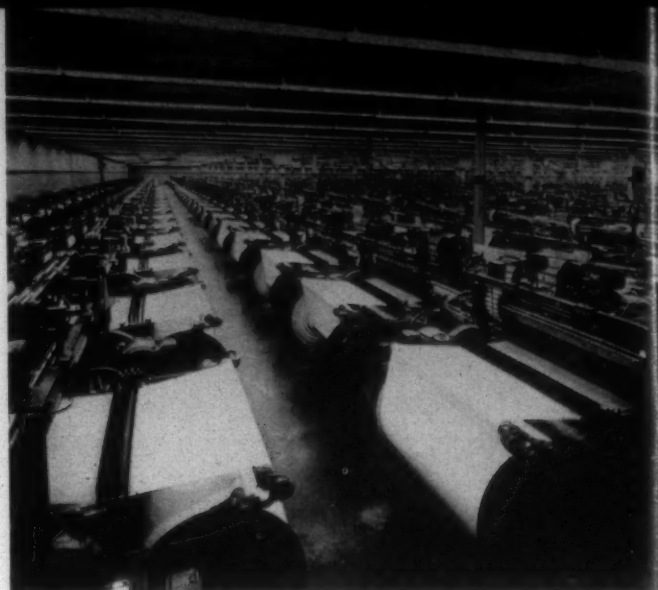
material, produced by Pittsburgh Corning Corp., is also used on the roof. Two-inch-thick blocks are laid in hot asphalt over a three-inch wood deck and covered with a four-ply built-up roof covered with gravel.

J. B. Templeton, vice-president in charge of manufacturing at Clinton, says this cellular glass insulating material provides a moisture-vapor barrier on walls and roof of the weave room. This insulation, coupled with the operation of four evaporating cooling systems which have been installed in four roof penthouses, makes it possible, Mr. Templeton said, to tailor the plant air to optimum weave room conditions.

The four evaporative cooling units, each with a capacity of 80,000 cubic feet per minute, are designed to handle a calculated heat load of 5,000,000 Btu per hour. They were designed and installed by White & Co. of Charlotte, N. C. Each of the four roof-top houses contains a fan operated by a 40-horsepower motor.

Throughout the weave room's 121,000 square feet of production area, the temperature shows little variance from a range of 80 to 85 degrees and relative humidity is held at an almost constant 80 per cent.

Completely inorganic, and with a closed cell structure, the Foamglass is waterproof and vaporproof. It cannot absorb moisture, which impairs the insulating efficiency of ordinary insulating materials; and in addition is fireproof, rotproof and verminproof. Being waterproof and vaporproof, the material has a constant insulating value, a factor taken into serious consideration in the determining of the



Accurate control of temperature and humidity without damaging condensation is expected to be maintained in this new weave room of the Clinton (S. C.) Cotton Mills to keep 1,300 looms in operation on a 24-hour day, six-day week schedule. Foamglass, a cellular glass insulating material produced by Pittsburgh Corning Corp., was installed in walls and roof to eliminate condensation problems in the high humidity and temperature range required for peak production of the looms.

size and capacities of the air conditioning units installed in the roof penthouses. The material weighs only nine pounds per cubic foot, yet has a compressive strength of 100 pounds per square inch.

## *Bleaching, Dyeing & Finishing*

### **Epoxy Resins In the Creaseproofing Of Cotton**

By C. W. SCHROEDER & F. E. CONDO, Shell Development Co., Emeryville, Calif.

**This story of a new creaseproofing agent is abstracted from a paper prepared by Messrs. Schroeder and Condo for the recent Chemical Conference sponsored by the National Cotton Council.**

**T**HE epoxy resins are an entirely new class of compounds for the creaseproofing of cotton unlike any other commercially available creaseproofing resin. The most outstanding feature of the epoxy resins is the fact that they are absolutely non-chlorine-retentive. The three features which make them different are (1) the presence of an epoxide or oxirane ring, (2) the absence of nitrogen, and (3) the absence of formaldehyde. All of the well-known resins which impart a substantial degree of crease resistance do contain formaldehyde, therefore some have felt that the material used is merely a carrier for formaldehyde which is liberated to give the noted effects. The fact that epoxy resins do give crease resistance while they contain no formaldehyde

should help to dispel this theory. The absence of formaldehyde is also of practical value in that odor development which may occur with nitrogen-formaldehyde resins cannot occur with epoxy resin-treated fabrics.

The absence of nitrogen overcomes the problem of chlorine-retention. Since the epoxy resins contain no nitrogen, they are absolutely non-chlorine-retentive and it is now possible for the first time to obtain a crease-resistant white fabric which can be bleached and ironed without scorching or loss of strength. Furthermore, this non-chlorine-retentive property is not destroyed by repeated hot alkaline washing or by repeated washing and chlorination as is the case with "chlorine-resistant" types of nitrogen-formaldehyde resins.

Quite a number of epoxy containing compounds have been synthesized and evaluated in the creaseproofing of cotton. As would be expected, these compounds have varying degrees of effectiveness. Based on over-all performance, cost and other factors, Experimental Resin 694 was selected as being the best candidate and it is now being marketed under



the name of Eponite 100 (trade mark, Shell Chemical Corp.)

### Physical Properties of Epoxy Resins

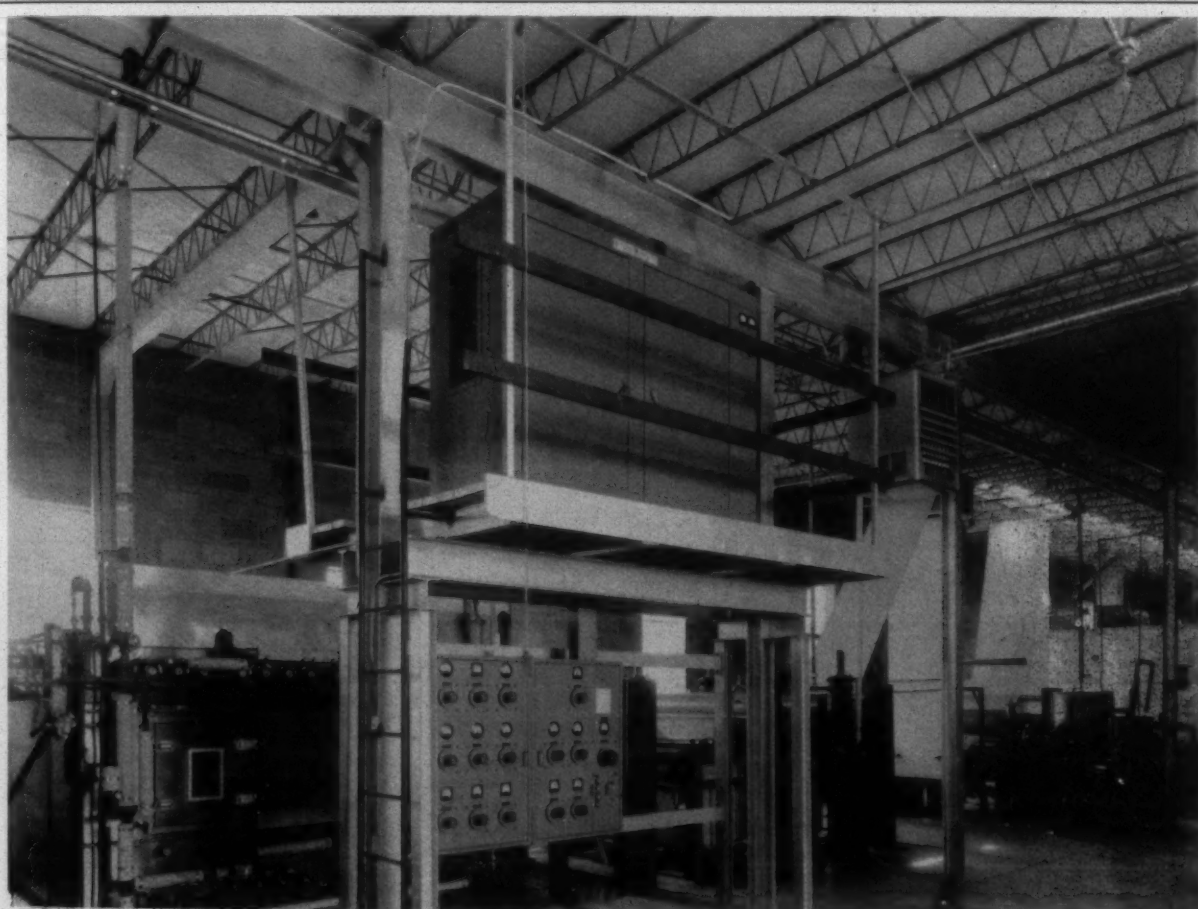
Epoxy resins are 100 per cent reactive materials. Since they are not solutions or emulsions, freezing has no effect on them. Because they are less reactive than methylol containing resins, their storage stability is excellent. They are essentially neutral but may on occasion be slightly alkaline. They have a slight but not unpleasant odor. Viscosity and color vary over quite a range.

Eponite 100 is largely water soluble but does contain a difficulty soluble fraction. Both the easily soluble and the difficulty soluble fractions are equally useful in this application, however. Consequently, the poorer soluble portion is not separated but is emulsified during the preparation of the pad mix. Emulsification is not an arduous task but we realize that complete water solubility would be much preferred, so work is being carried out in an attempt to modify the synthesis to give complete water solubility.

Epoxy-containing compounds react with a variety of other

compounds and with themselves to give, if both the epoxide and coreactant are polyfunctional, polymeric products. Some of these materials include amines, carboxylic acids and alcohols. A secondary hydroxyl is always formed as a result of the addition. In the reaction with a primary amine a secondary amine is formed which can react with another epoxide. With diprimary amines and diepoxides, highly cross-linked polymers are formed. With carboxylic acids an ester group is also formed. With dicarboxylic acids of moderate strength and a diepoxide, linear polymers are obtained. If one employs a strong acid such as oxalic acid, crosslinking will occur giving an insoluble cross-linked polymer. Reaction with alcohols gives a primary ether in addition to the secondary alcohol. If a polyhydroxy compound such as glycerine is used with a diepoxide, a cross-linked polymer is obtained. Cellulose, a polyhydroxy compound, apparently reacts in the same way.

The reaction of amines and carboxylic acids with epoxides is very fast and no catalyst is required. Reaction with alcohol or polymerization is very slow, however, and here a catalyst is needed. Primary or secondary amines or carboxylic acids do not act as catalysts for the reaction of epoxides with



**SPEED VARIATOR HELPS BOOST PRODUCTION, CUT WATER USE**—A new manufacturing system powered and controlled by a Speed Variator packaged drive has tripled production at Timberline Fabrics Co., Denver, and cut consumption of water used in the operation by approximately 85 per cent. The company processes raw fabric brought in from Eastern mills. By use of the new system the entire process—including scouring, dyeing, fixing, sizing and drying—is accomplished on a one-line operation. Line speed is controlled by the Speed Variator. Because of continuous feeding and removal of the finished fabric it is unnecessary to stop the machinery to change rolls.

Manufactured by General Electric, the Speed Variator provides direct current from an a.c. power source through use of a motor-generator set. The packaged drive also includes necessary control.

Officials of the fabric company said that water consumption was formerly one to 1½ million gallons a month, but that with the new equipment this has been cut to about 200,000 gallons monthly. They said the Speed Variator provides simplified connections, saves valuable space by being mounted above the floor and assures accurate control of the operation.



## BLEACHING, DYEING & FINISHING

alcohols or the polymerization of epoxides since they react quickly with the epoxides to form the amine adducts or esters. Thus, if you had a mixture of an epoxide, an alcohol and an amine, you would obtain the amine adduct with very little if any ether formation. Polymer of this type deposited in or on fabric is useful in some applications, but it does not produce crease resistance in cotton.

The ratio of ether adduct to polymer formation depends on a number of things. These are: type of alcohol, concentration of alcohol, and type of catalyst.

If a primary alcohol is used and the proportion of alcohol to epoxide is relatively high, the product will be predominantly ether. Conversely if a secondary alcohol is used or if the proportion of alcohol is low, polymerization is favored.

Catalysts suitable for this reaction are strong alkalis, tertiary amines, mineral acids or acid liberating salts. Strong alkalis and tertiary amines give predominantly polymer formation with some ether formation. For instance, in the reaction of equimolar concentration of phenyl glycidyl ether and isopropyl alcohol catalyzed with either potassium hydroxide or benzyldimethyl amine, 80 per cent of the isopropyl alcohol was recovered.

Strong acids or acid liberating salts favor ether formation. For instance, in the same reaction the use of stannic chloride or boron trifluoride etherate gave very little unreacted isopropyl alcohol. The use of strong acids for the reaction of epoxies with cellulose is out of the question, however, since

severe loss in strength is encountered. This leaves the acid liberating salts, which have proven very effective.

If one applies ten per cent of Eponite 100 to cotton fabric, the proportion of hydroxyl to epoxy is about 26 to 1. Considering only the primary hydroxyls in cotton, the proportion is still 8 or 9 to 1. With this high proportion of alcohol groups to epoxy groups coupled with an acid liberating catalyst, we feel fairly confident that cellulose crosslinking is predominant in this system and that polymer formation is relatively low. In addition, the treated fabrics are insoluble in cellulose solvents such as Triton B (trimethyl benzyl ammonium hydroxide) or cuprammonium solution, and they exhibit immunization toward direct dyes.

### Catalysis

Since epoxy groups are less reactive than methylol groups, catalysts which are ordinarily used with nitrogen-formaldehyde resins are not effective for epoxy-containing compounds. For instance, the amine hydrochlorides, metal halides, or ammonium phosphate do not produce the desired effect. Stronger catalysts such as the fluoborates, perchlorates or sulfates are required.

The fluoborates and sulfates have been studied in detail. It has been found that the catalytic activity of the amine fluoborates depends on the basic strength of the amine used. That is, the weaker the amine the better the catalytic activity. For instance, the fluoborate of diethyl aniline (which has an ionization constant of  $3.8 \times 10^{-10}$ ) is an effective catalyst

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PIN PLATES & CLIPS**



whereas the fluoborate salt of triethyl amine (which has an ionization constant of  $5.6 \times 10^{-4}$ ) has very little catalytic activity. These amine fluoborates, however, impart color to the fabric so are of little value.

The metal fluoborates on the other hand behave in the same manner but do not impart color. A number of metal fluoborates have been examined to determine their catalytic activity. This was carried out by impregnating 80 x 80 print cloth with 15 per cent emulsions of epoxy resin which would give about 10.5 per cent resin pick-up. In each case the amount of metal salt used was equivalent to 5 parts of fluoboric acid per hundred parts of epoxy resin and the pH of the pad bath was kept between 3.0 and 4.0 to avoid pH effects. It was found that zinc, magnesium and aluminum fluoborates were excellent catalysts. Copper, nickel and cadmium were fairly active. Lead, tin and mercury were moderate. Calcium and beryllium fluoborates showed mild catalytic activity while potassium and sodium showed practically none.

Certain selected metal sulfates were also examined to determine their catalytic activity. Again 80 x 80 print cloth was impregnated with a 15 per cent emulsion of epoxy resin which gave about 10.5 per cent of resin add-on. Rather than keeping the concentration of sulfate radical constant as in the case with fluoboric acid, the concentration of sulfate radical was varied in an attempt to determine optimum catalyst concentration. The solutions were also used at the pH obtained rather than adjusting to a constant pH. As in the case of the amine fluoborates it was found that catalytic activity was dependent upon the basic strength of the metal used. Sulfates of weakly basic metals gave high crease recovery at relatively low concentrations whereas the sulfates of strongly basic metals gave poor crease recovery even when high concentrations of the salts were used. The relative order of the metal sulfates does not correlate with the order obtained with the fluoborates. For instance, zinc and aluminum fluoborates had about the same effectiveness whereas aluminum sulfate was more active than zinc sulfate.

The salts of very weak metals cannot be employed, however, since excessive tendering of the fabric is encountered. For instance, ceric hydrogen sulfate gives a very weak fabric. Aluminum and beryllium sulfates give good crease resistance but tensile loss is very great. Ferric sulfate gives a good ratio of crease-recovery to tensile strength but unfortunately color is produced, as would be expected. Zinc sulfate gives fair crease-recovery and of the sulfates appears to offer the most promise. Sulfates of strongly basic metals such as cadmium show only mild catalytic activity.

Since the decreasing effectiveness may have been due to increasing pH, zinc sulfate was evaluated at a pH of 3.5 to compare to the pH of 5.7 obtained without pH adjustment. The crease-recovery and tensile strength obtained at a pH of 3.5 was comparable to that obtained at 5.7, showing that acidity of the bath is not the factor determining catalytic activity. This is partially substantiated by comparing ceric hydrogen sulfate run at a pH of 1.3 and sodium hydrogen sulfate run at a pH of 1.0. The former had extreme catalytic action while the latter had none. This was also found to be true for the zinc fluoborate system. Fabrics impregnated with a solution at the normal pH of 3.5 and a solution which had been adjusted to a pH of 6.0 gave identical crease recovery and tensile strength.

This does not mean, however, that pH can be ignored, since strong alkalis will neutralize the catalyst being used

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to give either sodium fluoborate or sodium sulfate which are known to be ineffective. Fabrics to be treated should therefore have a residual alkali content of less than 0.1% or catalyst neutralization will occur.

Since zinc fluoborate has given the best results, it is being recommended for use with the epoxy resins. It has been available in the crystalline form as the hexahydrate and is now available as a 40 per cent solution. The optimum amount to use has been determined at  $7\frac{1}{4}$  parts of the hexahydrate per hundred parts of epoxy resin. This is equivalent to 12.5 parts of the 40 per cent solution or five parts anhydrous. Since the hexahydrate was used in part of the work and the 40 per cent solution in another part, all references to zinc fluoborate are based on the anhydrous material to avoid confusion.

### Performance

As is the case with all creaseproofing resins, increase in resin content gives increase in crease resistance, with the first increments giving the highest proportional effect. Data were obtained on 80 x 80 cotton print cloth impregnated with various amounts of an epoxy resin using five parts of (anhydrous) zinc fluoborate. The impregnated fabrics were dried for five minutes at 90° C. and cured for five minutes at 320° F. With about seven per cent of resin, crease recovery is raised from about an MCRA of 81° to about 118°. At 10.5 per cent resin add-on the slope of the curve begins to fall off slightly giving 134°. At higher resin add-on the curve approaches the maximum asymptotically, and at 21 per cent add-on a crease-recovery of 149° is obtained. The data presented here are specific but the same type curve has been obtained on numerous occasions so can be considered as typical performance.

Likewise, tensile strength of the fabric is lowered as the add-on of epoxy resin is increased. Small amounts of resin give quite a high strength loss in comparison to high concentrations of resin. For instance, at 3.5 per cent resin add-on, a 20 per cent strength loss is obtained whereas at 10.5 per cent resin a strength loss of 36 per cent is obtained. Strength obtained with 21 per cent of resin is not shown here since it was only determined once and therefore cannot be considered typical. However, in this one experiment a loss of only 33 per cent was obtained indicating that further strength losses do not occur.

This phenomenon is further illustrated by plotting tensile strength against crease recovery. Usually one obtains a linear relationship between crease recovery and tensile. That is, tensile strength decreases linearly as crease recovery increases. This is not the case with epoxy-treated cotton. At low resin add-on more strength is lost than would be predicted from the gain in crease recovery. At high crease resistance, however, strength loss of epoxy-treated fabrics is the same as ethyleneurea-formaldehyde-treated fabric.

As resin add-on is increased, tensile loss becomes proportionately less in comparison to crease recovery obtained and actually flattens out giving crease recovery without appreciable loss in strength. For instance, at a crease recovery of 149°, a tensile strength of 40 pounds was obtained indicating that tensile does not continue to decrease.

It is common practice in resin finishing to employ a softener, lubricant or plasticizer to improve mechanical

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properties. Most of the common softeners used by the resin finishing industry are not useful for use with epoxy resins because of color or lack of chlorine resistance. The type of softener recommended for use with epoxy resins is an epoxidized unsaturated vegetable oil such as epoxidized soya bean oil. Twenty parts of softener per hundred parts of epoxy resin (as used to obtain these data) gives good results, although this amount may be varied to fit certain conditions. Softeners containing nitrogen should be avoided since this introduces the possibility of chlorine retention. The epoxidized oils are favored since it is felt that they are actually tied to the cellulose or to the epoxy resin giving good wash-fastness. The permanence of the softener to laundering is excellent. 80 x 80 print cloth treated with 10.5 per cent of resin had an original tear strength (after an initial scour) or 1.0-1.1 pounds. After ten washings in a household automatic washing machine at 160° F. (using a built soap) the tear strength was 1.2 pounds while after 20 such washings the tear strength was still 1.2 pounds. At 7.0 per cent resin add-on the initial strength was 1.2-1.3 pounds while after ten and 20 washings the tear strength was 1.6 and 1.4 pounds, respectively. Tear strength of the original goods was 1.3 to 1.5 pounds.

Tensile strength can be similarly improved by the addition of elastomeric latices. The addition of, for instance, 30 parts of Hycar 1561 per hundred parts of epoxy resin raises the tensile strength from 42.9 pounds to 51.1 pounds. In addition, the crease recovery was raised from 124 to 136° and the tear strength from 1.04 to 1.27 pounds. The addition of larger amounts of rubber does not appear to be helpful to crease recovery or tensile strength but does seem to continue to help tear strength. At the optimum concentration of 30 phr a strength loss of only 27 per cent occurs whereas with no rubber a 38 per cent loss occurs. Many elastomeric latices on the market contain anionic emulsifiers or additives which are not compatible with the epoxy resin system. Therefore tests should be made with any latex before attempts are made to use them in production.

#### Effect of Chlorine Bleaching

The epoxy resins are the only commercial creaseproofing agents which are truly non-chlorine-retentive either initially or after repeated alkaline washing. Fabrics treated with an epoxy resin, a melamine resin and an ethyleneurea resin (applied in the laboratory according to the manufacturers recommendations) were given the standard A.A.T.C.C. chlorine test after a light scour to remove solubles and after a one-hour alkaline wash. After the light scour, the epoxy resin-treated cloth showed no decrease in tensile strength from chlorination whereas melamine-treated fabrics showed losses of 11.9 and 13.6 per cent and ethyleneurea-treated fabrics showed losses of 9.5 and 14.0 per cent. After the one-hour alkaline wash the epoxy resin-treated fabrics showed a loss of only 2.8 per cent in strength in comparison to 18 and 19 per cent for melamine-treated fabrics and 50 and 74 per cent for ethyleneurea-treated fabrics.

#### Durability of Epoxy Resin Finishes

The durability of epoxy resin finishes is extremely good not only toward alkaline laundering but toward acid hydrolysis as well. This is probably due to the fact that the epoxy resins contain carbon to carbon bonds which are difficult to hydrolyze whereas the conventional resins contain carbon

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to nitrogen bonds which are more readily hydrolyzed. Fabrics containing various amounts of epoxy resin were washed up to 20 times in a household automatic washer using a built soap. After one wash, fabric with 10.5 per cent add-on had a crease recovery of 132-134°. After ten washings this was still 132° while after 20 washings the crease angle dropped to 127°. Similarly a fabric containing seven per cent of epoxy resin had crease angles of 116 to 120 after one wash and 122 and 115 after ten and 20 washes, respectively.

The same excellent durability is also obtained if one employs the standard cotton wash (A.A.T.C.C. 14-53). Fabrics containing 10.5 and 7.5 per cent of epoxy resin were given a light scour followed by one and five cotton washes. After the light scour the fabric containing 10.5 per cent resin had a crease angle of 132° which remained unchanged at 128 and 131° after one and five cotton washes, respectively. The fabric containing seven per cent of resin likewise exhibited the same durability, with crease angles of 112, 116 and 115 after zero, one and five cotton washes, respectively.

Durability toward acid hydrolysis was determined by agitating resin-treated fabric for 25 minutes in 50 times their weight of 0.1N hydrochloric acid held at 150° F. followed by thorough rinsing and conditioning. The epoxy resin-treated fabrics had the same crease recovery after this treatment as they did before, whereas cloth treated with an ethylene-urea-formaldehyde resin lost substantially all of its crease resistance.

#### Moisture Regain and Drying Time of Epoxy Resin-Treated Fabric

Epoxy resin-treated fabrics have a slightly lower moisture regain than untreated fabric and in addition dry faster. Moisture regain and drying time was carried out on 80 x 80 print cloth containing about 10.5 per cent of epoxy resin. Fabric containing the epoxy resin had a regain of 5.9 per cent after conditioning for three hours while the untreated control had a regain of 6.8 per cent after this length of time showing that regain has been reduced. Data indicate that epoxy-treated fabrics absorb less water and reach a practical "dry state" in about one-fourth the time required for untreated fabric.

The epoxy resins give slightly less crease resistance than can be obtained with either the ethyleneurea or melamine-formaldehyde resins. Effectiveness of the epoxy resins is about equal to that obtained with the urea and ethyleneurea-formaldehyde resins and slightly lower than that obtained with the melamine-formaldehyde resins. Dimensional stability achieved is as good as that achieved with high loadings of formaldehyde but strength loss is much less. Luster of fabric treated with epoxy resins is excellent, being as good as untreated fabric in comparison to the decrease in luster obtained with other resins. In addition epoxy resins do not change the feel of the fabric in comparison to some resins which may leave the fabric harsh and boardy.

The absence of odor during processing, the absence of odor on the finished fabric and the absence of fish odors during storage which sometimes develops with nitrogen-formaldehyde resins are also advantages in favor of the epoxy resins.

Durability of the epoxy resin finish to laundering is excellent, the fabrics retaining substantially all of their crease resistance for the life of the garments. In resistance to acid hydrolysis the epoxy resins are unique, being the only crease-proofing resins which are able to withstand acidic conditions.

Treatment with formaldehyde gives various effects depending on the amount of formaldehyde bound and the type of cure. For instance, one can achieve good dimensional stability with little crease resistance and slight strength loss. To achieve crease resistance, however, one must sacrifice most of the fabric strength.

The most outstanding property of the epoxy resins is non-chlorine-retention. A qualitative comparison of the effect of chlorine bleaching produced by various creaseproofing agents illustrates the superiority of epoxy resin finishes over conventional finishes. We find that epoxy resin-treated fabrics are unaffected initially while the ethyleneurea and melamine-formaldehyde resin-treated fabrics are affected to some degree and the urea-formaldehyde resin-treated fabrics are affected to the greatest degree. The same holds true after repeated washing and bleaching except that the ethyleneurea and melamine-formaldehyde resin-treated fabrics become less "chlorine resistant." The epoxy-treated fabrics do not yellow when treated with bleach as do the melamine-formaldehyde resins. Since the epoxy resins do not absorb chlorine they do not scorch after bleaching as do the nitrogen containing resins.

Formaldehyde-treated cottons are likewise unaffected by chlorine bleaching. However, since crease resistance cannot be achieved without high losses in tensile strength, this ability of formaldehyde-treated fabrics is rather academic.

#### Institute To Tell Vat Dye Story

To present the full story of what vat dyes can mean to the trade and the consumer, the Vat Dye Institute, a newly-formed non-profit organization composed of leading U. S. vat dye manufacturers, is launching a lively informational program employing advertising and public relations on a broad scale.

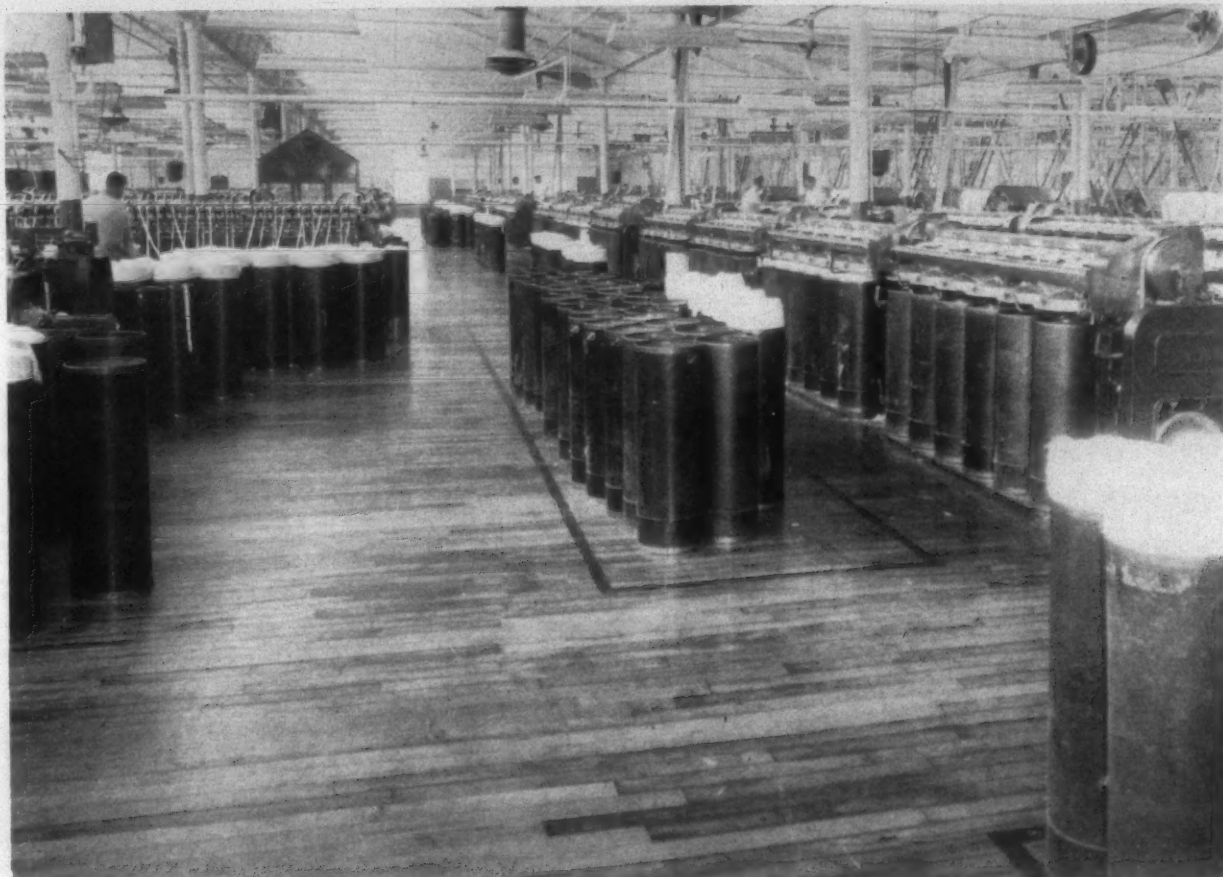
The program is designed to acquaint converters, ready-to-wear and home furnishings manufacturers, retailers and consumers with the superior colorfast qualities of vat dyes, used principally in dyeing cotton, viscose rayon and linen.

Members of the institute include: National Aniline Division, Allied Chemical & Dye Corp.; American Aniline Products Inc.; American Cyanamid Co.; Arnold, Hoffman & Co. Inc.; Belle Chemical Co.; Chemical Mfg. Co. Inc.; The Dow Chemical Co.; E. I. du Pont de Nemours & Co. Inc.; General Dyestuff Co., division of General Aniline & Film Corp.; Otto B. May Inc.; Metro Dyestuff Corp.; Pharma Chemical Co.; and Toms River-Cincinnati Chemical Corp.

The officers are Douglas C. Newman, Du Pont, president; Keith R. J. Horner, Toms River-Cincinnati Chemical Corp., senior vice-president; E. R. Herbertson, Arnold, Hoffman & Co. Inc., vice-president; and H. J. Daigneault, National Aniline, treasurer. Henry F. Herrmann is permanent executive secretary. The board of directors includes Douglas C. Newman, Du Pont; J. L. Naylor, American Cyanamid Corp.; E. M. May, Otto B. May Inc.; T. C. Keeling, American Aniline Products; J. R. Bonnar, General Dyestuff Co. The Vat Dye Institute office is located in Room 8010 Empire State Building, 350 Fifth Avenue, New York 1, N. Y.



## *Maintenance, Engineering & Handling*



Orderly and practical storage of roving cans improves the flow of stock and the physical appearance of Fieldcrest Mills at Fieldale, Va.

## Traffic Control At Work In Fieldcrest Towel Mill

As reported in the **FIELDCREST MILL WHISTLE**, zoned areas for material in process have contributed to orderly production.

**W**E don't recall who first said "A place for everything, and everything in its place," but it's a philosophy well taken to heart at the plants of Fieldcrest Mills. A prime example of this is the recent project completed at the firm's Towel Mill in Fieldale, Va. To improve the flow of traffic throughout each department, a detailed study was made of all storage locations for boxes, trucks and all movable equipment. Black zone lines were then painted on the floor to indicate these storage locations.

Employees have gone along with the plan 100 per cent, using the zoned areas for storage and leaving alleyways open for the free movement of production and traffic

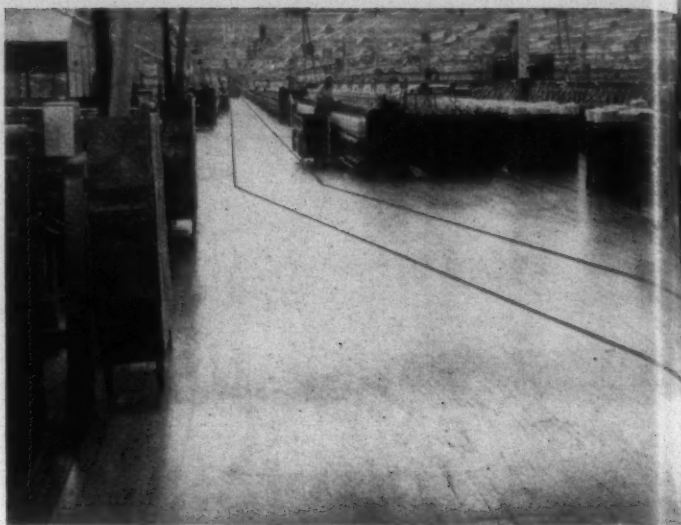


Storage space is at a premium in the sewing room, where zone lines now permit fullest space utilization.

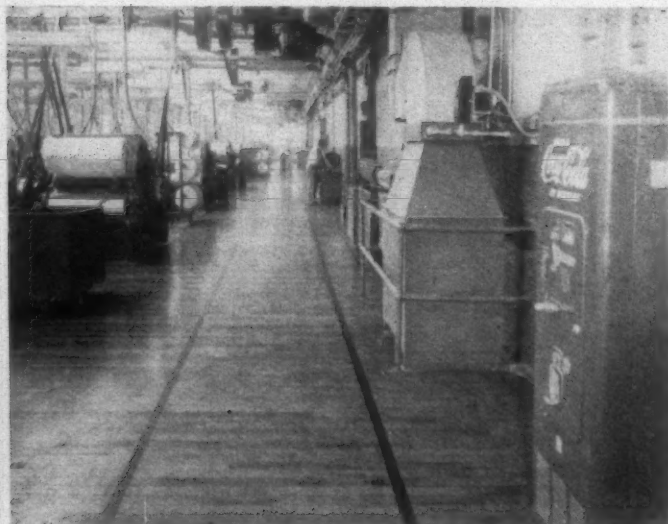




In the spooling and winding room, a well-arranged yarn and cheese storage system gets the most out of the available floor space.



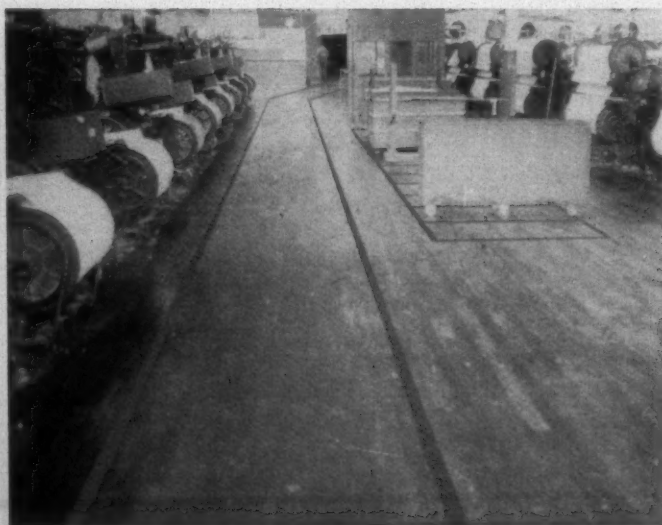
The main aisle through the mill is marked off and kept open for free movement of production at all times. Every piece of movable equipment has a storage area outside of the aisle zone.



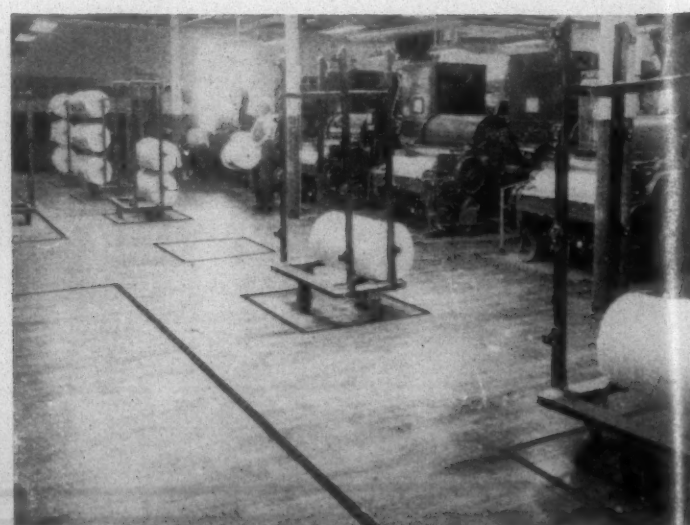
Zone lines running the length of the card room indicate route of traffic through the mill. Storage areas are marked for equipment, boxes, lap trucks, etc.



At the end of the bleachery, zone lines show the different traffic routes. Note the well-kept bottle racks, trash containers and guarded water cooler.



Convenient storage of finishing trucks (right) keeps this main aisle through the weave room open for the movement of traffic at all times.



Trucks in the picker room are placed conveniently for handling laps from the pickers. The large zoned area in the foreground is for storage of lap trucks.



## MAINTENANCE, ENGINEERING & HANDLING

through all departments. The result has been not only a better movement of traffic, but also a more attractive appearance of the departments.



The zoning system has improved the appearance of the finishing room as well as providing more orderly storage of goods.

In commenting on the project, D. A. Purcell, plant manager said: "The success of our zoning program is due to the co-operation of the employees with the departmental supervisors. By continuing to work together we can make further improvements until we have outstanding housekeeping. Orderly and clean departments not only improve our production and quality but also make the mill a more pleasant place in which to work."

Howard Barton, secretary of the Fieldcrest housekeeping committee, complimented the management and employees of the mill for the improvements resulting from the zoning program, pointing out that "an orderly arrangement of operation, movement of production and storage of movable equipment is a fundamental of good housekeeping."

### Four Ways To Prevent 'Wicking' Of Hose

When the unprotected end of a rubber hose is placed in a liquid, "wicking" may occur that will shorten the effective reinforcement of the hose by capillary action similar to the action of kerosene traveling up the wick of the old-time kerosene lamp.

The liquid will attack and weaken the fibers for a considerable distance from the exposed end. "Wicking" may even cause the hose end to swell and eventually to fail. According to recommendations of field engineers of the Thermoid Co. of Trenton, N. J., the simplest way to overcome "wicking" is to couple a length of metal pipe on the hose end long enough to prevent contact of the hose end with the liquid. The pipe should, of course, be inserted into the hose and not over the outside cover.

Another easy way to avoid "wicking" is to use a standard metal end protector which will seal the end against contact with the liquid.

A third possibility is the use of a liquid neoprene rubber compound which dries in a durable film over the end of the hose and prevents the entry of liquids into the fibers of the carcass.

A fourth possibility is dipping the end of the hose in shellac to form a film over the end of the hose. This is only good for water applications and should not be used with strong solvents.

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# PERSONAL NEWS



George E. Prime

George E. Prime has joined Stein Hall & Co. Inc. at its Southern textile laboratory in Charlotte, N. C., where he will assist the chief chemist in technical service and development work on new products for the textile industry. Mr. Prime was with Warwick Chemical Co. Division of Sun Chemical Corp. from 1945 to 1950, and with the Metro-Atlantic Inc. from 1950 to 1951. Most recently he has been with the Esmond Chemical Division of General Products Co. where he was chief chemist of both the control and development laboratories and was also concerned with sales service and plant production supervision.

L. David Garratt has been named assistant cotton buyer with the cotton department of the American Thread Co. Mr. Garratt joined the company in 1937, and has been associated with the cotton department since that time.

John Richard Fulp Jr. of Anderson, S. C., has been elected assistant vice-president and director of Abney Mills, Greenwood, S. C. Mr. Fulp is one of the principal Abney stockholders. He is the son of the late John Pope Abney of Greenwood, founder of Abney Mills.

Robert Train, executive vice-president of Bibb Mfg. Co., Macon, Ga., has been elected president of the company. He succeeds Charles C. Hertwig, who had held both the presidency and the chairmanship of the board of directors. Mr. Hertwig continues as board chairman. Named senior vice-president was G. P. Barnwell, vice-president in charge of sales. Hugh M. Comer, controller, was named vice-president and controller. Mr. Train joined the company in 1937, and served the company in various positions before being named a vice-president two years ago.

Herman Cone, Cone Mills Corp., Greensboro, N. C., has been elected to a three-year term on the national board of the National Conference of Christians and Jews.

John P. Stevens Jr., chairman, J. P. Stevens & Co. Inc., has accepted the chairmanship of the textile committee of American Industry of the National Fund for Medical Education. The committee is spearheading a nationwide appeal to raise \$10 million

for the country's 82 medical schools. Working with Mr. Stevens on the committee are Joseph N. Axelrod, president, Wamsutta Mills; Louis Bachmann Jr., vice-president, Bachmann Uxbridge Worsted Corp.; Whitworth F. Bird, president, Collins & Aikman Corp.; William N. Chace, executive vice-president, Greenwood Mills Inc.; John B. Clark, president, Coats & Clark Inc.; Thomas F. Draper, The Top Co.; Lamar Fleming Jr., chairman, Anderson Clayton & Co.; J. B. Frierson Jr., president, Dixie Mercerizing Co. Inc.; Lowell E. Hawthorne, vice-president, Amerotron Corp.; A. G. Heinsohn Jr., president, Cherokee Textile Mills; Malcolm Jones, president, Sidney

Blumenthal & Co.; Archie O. Joslin, director, M. Lowenstein & Sons Inc.; Joseph L. Lanier, president, West Point Mfg. Co.; John T. Lawrence, president, Folkard & Lawrence; Frank H. Leslie, Leslie & Co.; Roger Milliken, president, Deering, Milliken & Co. Inc.; Brackett Parsons, president, Pepperell Mfg. Co.; John M. Reeves, president, Reeves Bros. Inc.; Edward W. Ricci, president, Duro Finishing Corp.; B. Norman Rubin, assistant treasurer, Coleport Fabrics Inc.; Herman D. Ruhm Jr., president, Burlington Industries Inc.; Herbert H. Schell, chairman, Sidney Blumenthal & Co. Inc.; J. W. Schwab, president, United Merchants & Manufacturers Inc.; Edward



Paradis, Bowring, Wyskoczka, Frost  
Grubb, Pickett

**WOOLEN OVERSEERS ASSOCIATION**—The recently-organized Southern Textile Overseers Association held its first general meeting Saturday evening, Nov. 3, at the Poinsett Hotel in Greenville, S. C., to map future plans for the group and vote in a host of new members. Membership in the association is open to any person who has been an overseer, superintendent, designer or plant engineer for more than a year in a mill processing fibers under the woolen or worsted systems, as well as any person directly allied with the industry.

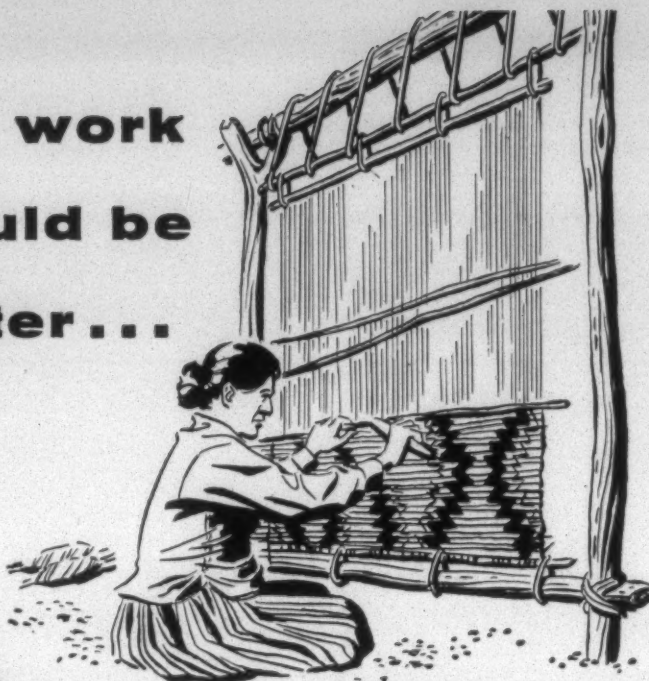
President of the group is George S. Pickett, superintendent of dyeing at Wyandotte Worsted Co., Conestee, S. C., who is a past president of the National Association of Woolen and Worsted Overseers. Other officers include Charles Grubb, overseer of finishing, Wyandotte Worsted Co., vice-president; Lyman Frost, superintendent of Belton (S. C.) Bagging Co., secretary; Joseph R. Bowring, general supervisor, Abbot Worsted Co., assistant secretary; and B. William Wyskoczka, general overseer, Abbot Worsted, treasurer. Dinner speaker at the Nov. 3 general meeting was J. N. Paradis, editor of *Fibre and Fabric*, Maynard, Mass.



Seidman, Heineman & Seidman; George Sherman, president, G. Sherman Corp.; Joseph H. Sutherland, vice-chairman of the board, J. P. Stevens; and Mark Weitzenhoffer, Seminole Mfg. Co.

George R. Parks, vice-president of Golden Belt Mfg. Co., Durham, N. C., has been elected president of the Durham Kiwanis Club. Marchant, Co., president

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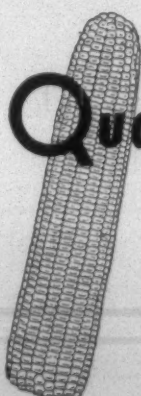
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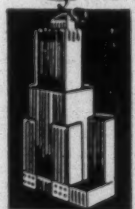
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## PERSONAL NEWS

cessing and Finishing." Prior to forming his own company to provide product and process development for the textile and other industries, Mr. Roblnette was with Rohm & Haas Co., Philadelphia, Pa., for six years, and was president of W. H. & F. Jordan Co., Philadelphia textile chemical manufacturer. He has presented a number of papers before technical associations in this country.



C. A. McAbee

Cecil A. McAbee has been appointed sales representative for Product Sales Inc. of Whitman, Mass. He will handle the company's complete line of products in the states of Alabama, Georgia, Mississippi, Louisiana, Arkansas and Texas. During some 21 years in textiles, Mr. McAbee has been associated with Huntsville (Ala.) Mfg. Co., Riegel Textile Corp., Trion, Ga., and Pacific Mills, Columbia, S. C. For the past several years he has been sales representative in Alabama and Georgia for the Dixon Corp.

Edward P. Krebs has been appointed general manager of all operations of Abbot Worsted Co., succeeding E. M. Abbot. Mr. Krebs will maintain his headquarters in

New York City. . . . Guy Branch, formerly head of the firm's Forge Village, Mass., plant, has been named branch agent of the company's Seneca, S. C., mill, replacing Herman A. Sayles who has resigned.

W. B. (Bill) McWhorter has been named supervisor of product development for the Valway Plant of Callaway Mills Co., LaGrange, Ga. Mr. McWhorter has been with Callaway since 1948. Since October 1955 he has served as second hand of Valway designing and development. . . . Reece S. Neal has been promoted to overseer of Valway finishing. A graduate of Georgia Tech, Mr. Neal joined the company in July 1955 as second hand in Valway finishing. . . . B. P. Albright, manager of the Unity Spinning Plant, has been re-elected president of the West Georgia Council, Boy Scouts of America for 1957.

Curwood Sessoms has been promoted from assistant overseer of spinning, Plant No. 5, Erwin Mills Inc., Erwin, N. C., to overseer of spinning, Plant No. 2. . . . C. Edwards has been promoted from second hand to supervisor of spinning, Plant No. 1.

Arthur Burnet of Greensboro has been named president and general manager of the spinning division of Burlington Mills. He has been named manager of the Mooresville (N. C.) Division of Cascade Rayon Plant, also at Mooresville. He will continue his duties as manager of the spinning division, and will retain his offices in Greensboro. . . . Carl E. Annas,

who has been with Burlington since 1945, has been named plant manager of Mooresville Mills. . . . William H. Spencer continues as plant superintendent of Cascade. . . . Basil Hill, who had headed Mooresville Mills since it was merged with Burlington, will be reassigned, Burlington reports, and L. K. Fitzgerald, who was temporarily assigned to Mooresville a few months ago, will be named plant manager.

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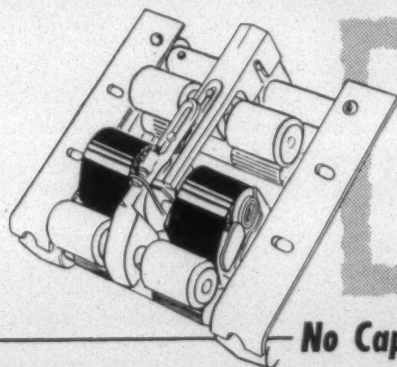
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- Can be installed a few parts at a time to spread investment — no parts wasted, no temporary elements needed.
- Very simple installation and operation.
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Southern Sales: R. E. L. Holt, Jr., and Associates Inc., Box 1319, Greensboro, N. C.  
Northern Sales: William R. Fox, P. O. Box 380, Providence, R. I.

Judson Mills, Greenville, S. C., has been named general manager of the Gerrish Milliken Mills, Pendleton, S. C., in addition to his duties at Judson. W. E. Thraill continues as manager of Gerrish Milliken. . . . Garland G. Simmons has been named general manager of Laurens (S. C.) Mills in addition to his duties as treasurer and general manager of Drayton Mills at Spartanburg, S. C. Martin Wallace continues as manager of Laurens Mills. . . . Kenneth M. Lowry has been elected general manager and director of Deering Milliken Service Corp. In this newly-created post, he will be in charge of industrial engineering, purchasing, cost and placement for the company in Greenville, S. C.; fiber quality control and research in Union, S. C.; and the engineering department in Spartanburg, S. C. Mr. Lowry joined Deering Milliken in 1942 as chief industrial engineer of Judson Mills. Since 1946 he has headed the industrial engineering department of the entire Deering Milliken group. Prior to 1942, Mr. Lowry was with Springs Cotton Mills and Riegel Textile Corp.

Harold Mercer, general manager of Firestone Textiles Inc., Gastonia, N. C., has been elected a director of the National Bank of Commerce, Gastonia.

Cornelius E. (Neil) Elphick, head of the warp sizing laboratory of the Nopco Chemical Co., Harrison, N. J., has retired after 20 years' service with the firm. Mr. Elphick, who is being retained on a consulting basis, plans to move to Daytona Beach, Fla., and catch up on his fishing.

Callaway Mills Co., LaGrange, Ga., has announced two personnel changes at its Elmrose Division. Norman McClellan has



been named overseer of the synthetic unit at the Unity Spinning Plant, and Ajalon A. Tillery has been named plant engineer at Unity. Mr. McClellan joined the company in March 1955 following graduation from the Alabama Polytechnic Institute. He is the son of Boyd McClellan, overseer of spinning at the Unity Spinning Plant. . . . Mr. Tillery, also a graduate of Alabama Polytechnic, has been with Callaway since February 1951. Since November 1955 he has served as sales assistant of the Elmrose Division.

Clare H. Draper has been named manager of the Greensboro, N. C., sales division of the Draper Corp., succeeding J. Craig Huff Jr., who has been transferred to the company's main offices at Hopedale, Mass., on special assignment in connection with the company's expanding diversification program. Mr. Draper had been with the company's sales office at Spartanburg, S. C. Paul Wilson, a member of the Greensboro sales staff, will act as assistant to Mr. Draper.



J. T. Gregory

J. Ted Gregory has been appointed to the newly-created post of manager of industrial engineering sales of The Gastonia (N. C.) Mill Supply Co. Mr. Gregory, a native of Union, S. C., and a 1949 graduate of Clemson College, has been with the Goodyear Tire & Rubber Co. in Charlotte and in Akron, Ohio. Since 1954 he has represented Goodyear as an industrial field representative. He will make his headquarters in Gastonia.

James C. Self, president of Greenwood (S. C.) Mills, has been elected to the board of directors of the First National Bank of Greenville, S. C.

W. A. L. Sibley, vice-president and treasurer of Monarch Mills, Union, S. C., has been elected to the board of directors of the Federal Reserve Bank of Richmond, Va. Mr. Sibley was named to his second three-year term as a director representing industry. Six of the bank's nine directors by law must be drawn from industry, commerce, agriculture, education or other activities not directly connected with banking. His term will begin Jan. 1.

Roy S. Fisher has been elected vice-president and named director of sales for National Vulcanized Fibre Co., Wilmington, Del. Since 1955, Mr. Fisher has served as manager of sales for National. Prior to that he was manager of the company's Cleveland-Pittsburgh-Cincinnati territory for 24 years. He joined the company in 1923, following graduation from Pennsylvania State University.

James D. Wise, president of Bigelow-Sanford Carpet Co. since 1944, has been elected chairman of the board. Succeeding him as president is Lowell P. Weicker. Mr. Weicker was president and director of E. R. Squibb & Sons from 1940 to 1952, and had served with the company for 25 years. From June 1953 until early this year, he was

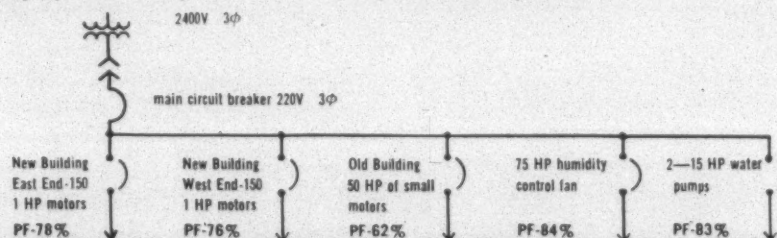


### 300 SPRAGUE $\frac{1}{2}$ KVAR POWER FACTOR CORRECTION CAPACITORS INSTALLED ACROSS THE TERMINALS OF 1 HP MOTORS DRIVING LOOMS AT BELDING HEMINWAY CO., BEDFORD, VA. PLANT

- 1 Motors are delivering 10% more HP and 5% more torque.
- 2 Amperage load of the circuits, panels, etc., has been decreased 33%.
- 3 Voltage has been increased to and stabilized at 237 V.
- 4 Power savings alone during the first two years exceed the entire cost of Power Factor Correction!

#### BUY ONLY THE POWER YOU NEED

The production and operating savings gained by raising your plant Power Factor can far outweigh the cost. When Sprague engineers were called in to evaluate the Belding Heminway Company's electrical system, here's an example of what they found:



#### USE ALL THE POWER YOU BUY

After surveying the entire system, Sprague recommended: one unit of  $\frac{1}{2}$  KVAR corrective capacitance across the terminals of each of the three hundred 1 HP motors driving looms off the East and West End feeders; three units of 25 KVAR corrective capacitance across the Old Building feeder; three units of 10 KVAR corrective capacitance each across the 75 HP Humidity Control Fan; and one unit of  $7\frac{1}{2}$  KVAR corrective capacitance across each of the two 15 HP Water Pumps.

Following installation of this 225 KVAR of corrective capacitance, new Power Factor readings showed the following improvement:

	East End	West End	Old Bldg.	Fan	Water Pumps
PF before	78%	76%	62%	84%	83%
PF after	97.5%	97.5%	Unity	92%	99.55%

It's likely that Power Factor Correction could cut your plant production and operating costs, too. Sprague engineers will be happy to survey your plant's present electrical system and recommend corrective measures at no cost. Write today for complete details and name of nearest representative to the Industrial Capacitor Division, Sprague Electric Company, 425 Marshall Street, North Adams, Massachusetts.

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WORLD'S LARGEST CAPACITOR MANUFACTURER



## PERSONAL NEWS

assistant secretary general for production and logistics, North Atlantic Treaty Organization, in Paris, France. Mr. Wise has been with Bigelow-Sanford since 1932 when he became the company's general counsel. In 1939 he was elected to the board of directors, and the following year to the executive committee. He was named president of the company in December 1944.

George Eudy of Charlotte, N. C., has been named Southeastern sales representative for Stepan Chemical Co., Chicago, Ill. A graduate of North Carolina State College, Mr. Eudy was formerly associated with Onyx Oil & Chemical Co. Prior to that he was with F. H. Ross & Co. and Kerr Bleachery.

L. E. Doxsie has been appointed to the newly-created post of assistant manager of the corn division of the A. E. Staley Mfg. Co., Decatur, Ill. Mr. Doxsie has been with the company 23 years, and has served since 1953 as materials and methods superintendent. His new assignment will encompass liaison with research and manufacturing operations of the company, and the administration of sales and distribution activities.

John M. Reeves, chairman of the board, Reeves Bros. Inc., has been selected to receive the sixth annual "Textile Award" to be presented by the New York Board of Trade's textile section. The presentation will be made at a luncheon at the Waldorf-Astoria Hotel in New York City on Thurs-

day, Dec. 6. The award is presented each year in recognition of "character, achievements and record of outstanding contributions to the textile industry." Mr. Reeves, who this year celebrates his 40th anniversary in the textile industry, is recognized as a pioneer in enlightened labor relations. Reeves Bros. was the first textile firm in the U. S. to introduce a pension system for all employees and one of the first to provide vacations with pay. Past winners of the award include Robert T. Stevens, J. P. Stevens & Co. Inc.; J. Spencer Love, Burlington Industries; Saul F. Dribben, Cone Mills Inc.; Floyd W. Jefferson, Iselin-Jefferson & Co.; and Dr. Daniel Douty, United States Testing Co. . . . Reeves Bros. announced last month the election of Jerry H. Wyatt, Joe D. Moore, Gordon Coles and Frank C. Rogers as vice-presidents of the company. In addition, Charles D. Green, vice-president and general manager of Southern operations, was named a director. Mr. Coles directs the company's finishing operations; Mr. Rogers and Mr. Wyatt are in greige sales and greige mill management; and Mr. Moore is in charge of finished goods sales.

Sam Wilkins of Stoneville, Miss., has been named overseer of weaving at J. W. Sanders Cotton Mills Inc., Starkville, Miss. . . . R. A. Frith of Magnolia, Ark., has been named second hand of carding and spinning for the company.

Richard H. Marsh has been appointed Southern regional sales manager of the

materials handling division of The Yale & Towne Mfg. Co., Philadelphia, Pa. Mr. Marsh will make his headquarters in Atlanta and supervise Yale sales and service activities in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and Texas. His appointment marks another step in a program by Yale toward the establishment of four domestic regional sales territories. The first established was a Western region.



R. C. Thatcher Jr.

Richard C. Thatcher Jr. has been elected vice-president in charge of thread sales of Standard-Coosa-Thatcher Co., Chattanooga, Tenn. Mr. Thatcher, former assistant vice-president, joined the company in 1937. He served in several departments of the mill until 1940, when he was promoted to the thread sales department in the Chicago territory. After two years in that position, he joined the Navy where he served for 3½ years. Upon his return to Standard-Coosa-Thatcher in 1946, he was assigned to the thread sales department at the mill in Chattanooga, and later that year was placed in charge of thread sales for the company. In 1952 he was elected assistant vice-president, thread sales, a position he has held until his present promotion.

Dr. Theodore Morel has joined Mona Industries Inc., Paterson, N. J., as chief chemist. In this post Dr. Morel will head the firm's research department and supervise the chemical phase of plant operations. He was formerly with Chemical Research Associates in Bernardsville, N. J.

Julius A. Schachner Jr., Schachner Leather & Belting Co., Charlotte, N. C., has been elected vice-chairman of the textile leather division of the National Industrial Leather Association. Mr. Schachner was also elected to the board of directors of the parent association, along with William F. MacDonald, E. F. Houghton & Co., Philadelphia, Pa.

R. D. Walter has been appointed regional sales service manager in the South for the Corn Products Refining Co. Mr. Walter will make his headquarters in the company's sales division office at Memphis.

Dr. Carroll A. Hochwalt, vice-president of research, development and engineering for Monsanto Chemical Co., was recently presented the 12th Midwest Award of the St. Louis, Mo., Section of the American Chemical Society. The award, a gold medallion, is presented annually for "meritorious contributions to the advancement of chemistry."

Edmon G. Luke has been named to succeed Robert L. Huffines Jr. as president of Amerotron Corp., textile subsidiary of Textron Inc. Mr. Luke joined Textron in April 1953 and has been executive vice-president of Amerotron in charge of greige goods merchandising since it was formed. Previously he was division manager of man-made greige goods of Bates Mfg. Co. and



Beetle-lite trucks are practically indestructible. Strong, continuous top and bottom steel reinforcements are completely enclosed in a heavy seamless Fiberglass body. Color is molded in, thus eliminating all need of painting. Made in nine sizes, with or without drain bottoms. Beetle-lite also furnishes doff and tote boxes, vats, crcks, and tubs.

Beetle-lite Fiberglass products will give better service and save you money. Write for full information today.

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Exclusive distributors to the textile trade in the U. S. and Canada.

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INCORPORATED

GREENVILLE, SOUTH CAROLINA

\*Trade Name



later president of Fox-Wells-Luke. Mr. Huffines continues as a director of Textron and will perform specific staff functions and assignments on a part-time basis. He will maintain offices at Textron's New York quarters. Mr. Huffines served as president of Textron from March 1953 to May 1956. He was president of Amerotron from its inception in September 1954, prior to the merger of Textron, Robbins Mills and American Woolen Co. He also served as president of Robbins Mills during the transition period. Prior to joining Textron he was president of Burlington Mills Corp. of New York. . . . In another Amerotron appointment, Merrill Little has been named assistant to Joseph Merten, director of greige goods quality control. Mr. Little has been with the corporation for many years. Prior to joining the New York staff, he was in charge of quality control at the company's Williamston, S. C., plant.

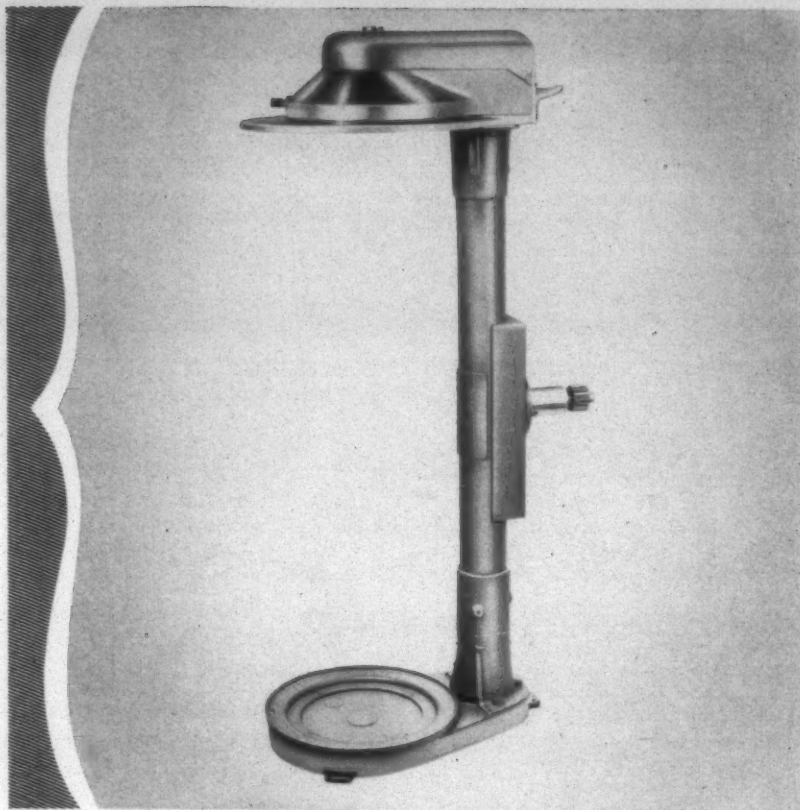
Aragon (Ga.) Mills, a unit of United Merchants and Manufacturers Inc., has announced the following recent personnel changes: Walter J. Keeter Jr. has assumed the duties of general overseer of carding and padding. A North Carolina State College graduate, Mr. Keeter was with Burlington Industries in Gastonia, N. C., prior to joining Aragon. He is a native of Cramerton, N. C. . . . Paul A. Hopkins has been promoted to shift overseer of spinning. Mr. Hopkins joined Aragon as head laboratory technician early last year. A native of Lindale, Ga., he was formerly with Pepperell Mfg. Co., Lindale. . . . Willie Lee Adams has assumed the duties of shift overseer of preparation. Mr. Adams, a native of Decalb County, Alabama, was with Anchor Rome Mills Inc., Rome, Ga., prior to joining Aragon. . . . Oliver L. Mason Sr. has been named shift overseer of carding. Mr. Mason held supervisory positions with Burlington Mills at Forsyth and Shannon, Ga., prior to joining Aragon.



Paul M. Platzman

Paul M. Platzman has been named vice-president of sales and manufacturing for Acoustica Associates Inc., Glenwood Landing, L. I., N. Y., manufacturer of ultrasonic equipment, instruments and processing systems. Mr. Platzman, a graduate of Georgia Tech, was formerly manager of the public relations department of John Mather Lupton Co. Inc., New York City. . . . Other appointments made recently by Acoustica include those of Harold P. Baker and Ralph Reynolds as vice-president and treasurer and technical sales manager, respectively.

Copeland Brothers and Co., sales yarn agents, has announced the following personnel changes: James R. Jennings, head of the firm's San Antonio, Tex., office, has been transferred to Dallas, Tex., to head up the office there. . . . Harry S. Redmond has been transferred from New Orleans to Akron, Ohio, to be in charge of the firm's Midwest and Chicago territory. . . . Carl G. Davidson has been transferred from Bue-



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## PERSONAL NEWS

nos Aires, Argentina, to Atlanta, Ga. Mr. Copeland recently moved the general sales offices of its sales yarn division from Griffin, Ga., to Atlanta.

Edmund Wellington Jr., secretary of the National Federation of Textiles, has resigned to join the Radio-Electronic-Television Manufacturers Association in Washington, D. C. Mr. Wellington joined N.F.T. in March 1955 as assistant to Miss Irene Blunt, executive director, and was made secretary of the association in June of this year.

Col. James E. Baker has been designated chief of the purchasing division of the new single manager military clothing and textile supply agency at the Philadelphia Quartermaster Depot. He succeeds Col. Alfred M. Koster, who has been transferred to Washington, D. C., to serve as executive officer to the Assistant Secretary of the Army (Logistics). Colonel Baker graduated from Clemson College in 1932 with a bachelor of science degree in textile chemistry. He subsequently engaged in textile dyeing, finishing and sales activities for major firms in the textile industry. He was called to active duty with the Army in July 1940. He has been assigned to the military clothing and textile supply agency since last August.

Harry P. Snyder, who has been with the Associated Press for nearly 20 years, has accepted a position on the public relations staff of the American Cotton Manufacturers Institute with headquarters in Washington, D. C. For the past year Mr. Snyder, a native of Mt. Vernon, Ohio, and a graduate of Miami (Ohio) University, has been regional membership executive for the Associated

Press, headquartered in Charlotte, N. C. From 1948 until last year he was on the Associated Press staff in Washington, D. C. Previously he had held A.P. assignments in Memphis, Nashville and Knoxville, Tenn., and had worked on the Mt. Vernon (Ohio) *Republican News*, the Columbus (Ohio) *Citizen* and the Dayton (Ohio) *Journal*. Mr. Snyder will join the Washington A.C.M.I. office around Dec. 1 after several weeks in the Charlotte office.

Edmund M. Buras has joined the staff of Harris Research Laboratories Inc., Washington, D. C. Mr. Buras was formerly with the Southern Regional Research Laboratory, U. S. Department of Agriculture, where he was in charge of chemical modification of cotton. In his new post he will supervise research on protein fiber developments.

Charles A. Lermond has been promoted to the position of senior research associate by Fabric Research Laboratories, Dedham, Mass. Mr. Lermond has been with the company since 1953.

## OBITUARIES

Ely Reeves Callaway Sr., 78, retired executive of Callaway Mills Co., LaGrange, Ga., died Nov. 5 at his home in LaGrange. Mr. Callaway was active with Callaway Mills 34 years, retiring in 1953 as vice-president, credit manager and director. He was also director of Callaway Mills Inc., the company's New York selling agency. Survivors include his widow, three daughters, a son and a sister.

Hugh Christison, 72, charter member and former national vice-president of the American Association of Textile Chemists

& Colorists, died Nov. 5 at his home in Methuen, Mass. Before his retirement five years ago, Mr. Christison had been chief chemist at Arlington Mills, Lawrence, Mass. An honorary member of the A.A.T.C.C., he served as national vice-president from 1944-46. He also had been a national councilor of the association, and had served on many A.A.T.C.C. research committees. Surviving are his widow, three sons and a daughter.

Frank Crummer, 65, assistant treasurer of Aberfoyle Mfg. Co., Philadelphia, Pa., died Oct. 15 in Philadelphia. Mr. Crummer joined the company in 1918 as assistant purchasing agent. He was later named purchasing agent and in 1951 was appointed assistant treasurer. His widow and two daughters survive.

Harry A. Haynes, sales representative for Mitcham & Co., Gastonia, N. C., died Sept. 9.

William Herbert McDowell, 73, one-time superintendent and later vice-president of the old Scotland Neck (N. C.) Cotton Mills, died Nov. 5 in Scotland Neck. Scotland Neck Cotton Mills became Halifax County Hosiery Mill in 1936, and Mr. McDowell remained with the firm as vice-president until his retirement in 1942. He is survived by his widow and two brothers.

Leo Wallerstein, 74, chairman of the board of Wallerstein Co. Inc., manufacturer of enzymes and special chemicals, died early this month at his home in Purchase, N. Y. Mr. Wallerstein came to this country from Germany in 1900. Two years later he joined with his brother, the late Dr. Max Wallerstein, in establishing the Wallerstein firm. Survivors include his widow, a son and two daughters.

## MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

COLUMBUS, GA.—Swift Mfg. Co. is planning to build an addition to its plant which will add about 36,000 square feet of manufacturing space to the present building. The new construction will consist of adding two floors to the present two-story structure. The third floor will be used to house spinning equipment which is now located in another part of the mill. The fourth floor will be used to enlarge the warp preparation department, and all the mill's slashers will be moved to the new space. New equipment for slashing and warp storage will be added later. Contract for the addition will be awarded as soon as detailed plans and specifications can be drawn up.

GOLDSBORO, N. C.—A new firm, Peacock Textiles Inc., has begun operations here. According to W. A. J. Peacock, president, the company will eventually employ some 45 persons in the manufacture of cotton mop yarn.

RANDLEMAN, N. C.—J. P. Stevens & Co. has leased a small spinning plant here owned by Cone Mills Corp. Stevens will put the mill in operation as soon as necessary machinery changes can be made. Cone Mills

bought the plant in 1947, and it has been idle since early this year.

MAGNOLIA, MISS. — Magnolia Textile Mills is making plans to re-open its plant here. The firm plans to invest \$750,000 to get the mill going again. Local citizens are being offered \$100,000 of this amount in stock, with the balance to come from sources outside the county. Some 600 persons have already applied for employment.

LYNCHBURG, VA.—Bates Mfg. Co. of Lewiston, Me., has purchased the Lynchburg Division of Consolidated Textile Co. Inc. for \$1,250,000. Payments in the transaction are to be spread over a 16-year period, beginning Dec. 31, 1957. The mill is equipped with 65,392 spindles and 1,800 looms, and produces sheetings, print cloths, broadcloth and handkerchief cloth, employing some 950 persons. An annual volume of between \$7 million and \$10 million is turned out by the division. Sale of the plant marks Consolidated's departure from the textile field. Last year the company closed mills at Shelby, N. C., and Kings Mountain, N. C., and is now in the process of selling its New England finishing plant. Lynchburg fabrics

will be used in Bates' expanding piece goods division. Frank C. Mawby, president of Bates, said the company wanted to acquire a weaving plant where it could control quality, rather than buy unfinished goods on the open market.

WAYCROSS, GA.—Scapa Dryers Inc. recently held official opening ceremonies at its new million-dollar dryer felt plant here, with company officials, Waycross and Ware County officials and business and civic leaders attending. According to Thomas Hindle of Blackburn, England, president of the British-Canadian firm, Scapa Dryers will employ some 200 persons at the new plant by the end of 1958. The plant is the company's first industrial installation in this country, and is equipped with the latest in dryer felt weaving and finishing machinery.

DARLINGTON, S. C.—All of the physical assets of Darlington Mfg. Co., a unit of Deering, Milliken & Co., will be offered at auction here Dec. 12 and 13. Plans for liquidation of the mill were announced last month following stockholders' approval of an earlier proposal by the board of directors to close the plant. The board made its



recommendation following a National Labor Relations Board election in which employees of the plant voted for representation by the Textile Workers Union of America. Union officials have since sought to bring unfair labor charges against management of the mill, while on the other hand employees of the plant have petitioned to have the election declared void or that a new election be held. Reports have circulated that several companies have indicated an interest in purchasing the plant as a going concern, but these firms have not been identified. The plant, which employed 525 and provided one-third of the jobs in the community, is equipped with 44,406 spindles and 873 looms. All machinery and equipment is said to be in excellent condition as the result of a modernization program in effect for several years.

COLUMBIA, S. C.—Six Abney Mills were awarded certificates for outstanding safety performances during the period of Oct. 1, 1955, through Sept. 30, 1956, at a special awards luncheon here Nov. 9. The awards, given annually by the South Carolina Industrial Commission, were made during the South Carolina Accident Prevention Conference held at the Columbia Hotel. Plants receiving the awards included: Anderson Mill, Anderson; Grendel Mill, Greenwood; Belton Mill, Belton; Woodruff Mill, Woodruff; Gossett Plant, Anderson; and Renfrew Bleachery, Travelers Rest. The Grendel Mill has also won first place in its category in a contest for outstanding safety performance sponsored by the South Carolina Textile Manufacturers Association. That award, a

bronze plaque, will be awarded by the state association.

BURNSVILLE, N. C.—Firth Carpet Co., the nation's fourth largest carpet manufacturer, has signed a long-term lease on the former Duplan Corp. property here. According to Harold E. Wadely, Firth president, the plant will be used to provide Firth with additional facilities to supplement present sources. The latest and most efficient equipment for carpet production will be installed and the plant will begin operations early next Spring, Mr. Wadely said. Firth was formed in Philadelphia, Pa., in 1884, and now has plants in Firthcliffe, Newburgh and Auburn, N. Y. Last year it established a jute and wool spinning plant in Puerto Rico. It is not known how many employees will be needed in the operation here, but full production is not expected to be reached until late next year. Frank G. Binswanger Inc., Philadelphia, Pa., industrial realtor, handled negotiations for the lease.

CALHOUN FALLS, S. C.—Bigelow-Sanford Carpet Co. has announced plans for building a modern carpet wool preparation and yarn spinning plant here. Construction is scheduled to get under way immediately, and plans call for manufacturing operations to begin in the second half of 1957. The plant will be known as Rocky River Mills. Building of the new plant is described as a further step in Bigelow-Sanford's program of decentralization and expansion. The program has thus far transferred Axminster weaving operations from Amsterdam, N. Y., to Thompsonville, Conn.; has very substantially increased

production facilities for yarn at Bristol, Va., and for tufted carpet at Summerville, Ga.; has established a new yarn mill at Belton, S. C., and a new velvet carpet plant at Landrum, S. C. The plant here has been designed by Lockwood Greene, architects-engineers of New York, and will be constructed by Daniel Construction Co., Greenville, S. C.

KINGS MOUNTAIN, N. C.—Slater Bros. Inc., manufacturer of plush fabrics, is beginning construction of a two-story addition to its plant here to provide an additional 21,440 square feet of floor space. The addition is expected to cost about \$85,000. The firm's parent company, with headquarters at Paterson, N. J., recently purchased all of the equipment of Pennsylvania Plush Weavers, Easton, Pa., and announced it would move it to the plant here. The Pennsylvania firm is liquidating as soon as current orders are completed.

PAW CREEK, N. C.—The Kendall Co. has appointed Frank G. Binswanger Inc., Philadelphia, Pa., realtor, as its agent for the disposal of Kendall's Thrift Plant here. Kendall announced last Summer that the mill would be liquidated as a result of a changing demand for fabrics needed in the integrated operations of the company and the inability of the Thrift Plant to meet these requirements. Binswanger has advised that the property—including 300 acres of land, a plant containing 220,000 square feet and a complete mill village with 127 homes—is being offered as an entity, or that it can be divided.

## 'Aunt Becky' Pays A Visit To Borden Mills

By ETHEL THOMAS DABBS

The title of this report might well be "Borden Revisited." Mrs. Dabbs was widely known throughout the Southern textile industry as "Aunt Becky" before her retirement as circulation representative for this journal.

BY special invitation from Mr. W. J. (Bill) Still, general manager and vice-president, Borden Mills Inc., the writer recently paid a delightful visit to Kingsport, Tenn. I accompanied my son, Ben C. Thomas, on his annual trip there in the interest of the TEXTILE BULLETIN, which goes regularly to a very large number of subscribers there.

It had been seven years since my last visit, and the changes and improvements were amazing. Borden Mills has 89,208 spindles, 2,500 looms, is air conditioned, lint and dust controlled, and is absolutely clean all over. All machinery is modern and automatic. Does any other mill have looms that start and stop by pushbutton?

An automatic carrier system picks up the big beams of cotton "batting," weighs them and strings them on an overhead rack where they click together like railroad cars, then travel over a line of cards and drops a beam in its proper place on the card, wherever needed, and nowhere else! In weighing these beams, if not the proper weight, this almost human machine will stop, turn on a light and ring a bell for the operator.

There's an escalator system that brings filling from the spinning room down to the weave room, and empty bobbins go back up the same way, unattended.

There's a large waiting or assembly room at the mill with plenty of seats

where change shifts, coming ahead of time, can visit together, read or discuss subjects of interest.

The big cafeteria which seven years ago was just outside the mill has been converted into commodious offices for officials. There's a nice reception room with lovely upholstered seats, and telephones. Mrs. Kathryn Penland is the efficient receptionist and mill telephone operator.

There is now a modern cafeteria on three mill floors, each a dream of beauty and cleanliness in plate glass, chrome and tile. The kitchen, on the first floor, has a complete freezer plant, makes its own ice and grinds it. There is a potato and apple peeler, a doughnut machine, dishwashers, warming



units, and everything is stainless steel and automatic. Dumb-waiters carry supplies to the two upper units, and all are open 24 hours a day. Mr. Jack May is the very likeable and busy cafeteria manager.

Miss Phyllis Johnson, secretary to Mr. Still, was my escort to these show places and it was rumored that the writer almost "walked her to death."

Mr. H. E. Baker, courteous and capable assistant to Mr. Still, showed me through the mills, and gave me a look at the big new warehouse extension which will soon be completed. It is 136 by 240 feet, and has 32,640 square feet of floor space.

Mr. Baker has been at Borden seven years, joining the company right after coming out of Auburn where he majored in textile engineering.

Mr. Lee Landers has charge of processing and maintenance. Mr. Sam Skelton, in charge of the roller shop, has been with the firm since 1925. The mill was built in 1924, and there are employees still with the company who helped start it up.

Mr. I. J. McClellan, formerly superintendent of weaving, Waverly Mills, Laurinburg, N. C., came to Borden in September for a similar but much larger position.

I had a nice visit with Mr. Ernest Cross, vice-president, who has not grown a bit older as I can see. He gave me a hearty welcome, as did Mr. Frank J. West Jr., personnel manager, Mr. J. F. Ellis, purchasing agent, Mr. C. C. Roberts, superintendent, Mr. Powell, overseer of weaving, and Mr. R. L. Burrell, plant messenger and trouble shooter. Eighteen years ago Mr. Burrell was a policeman at American Spin-

ning Mills, Greenville, S. C., when Mr. Still was superintendent there. He weighs 240 and it is a good thing Mr. Still doesn't want anyone exterminated, for this big man says he will "do anything at all that Mr. Still wants done." His station wagon is equipped with a radio like police use, and Mrs. Penland can locate him anywhere within ten miles and give or receive messages.

Kingsport was getting ready for the United Appeal drive at the time of my visit. These drives always go so far over the top, and such a surplus accumulates that in two separate years no drive was needed. The money was on hand and ready! Borden Mills' employees are 100 per cent on the job. The city and the company work together. Some time ago a drive was put on for \$750,000 for a hospital, and over a million dollars was the result! Hurrah for Kingsport!

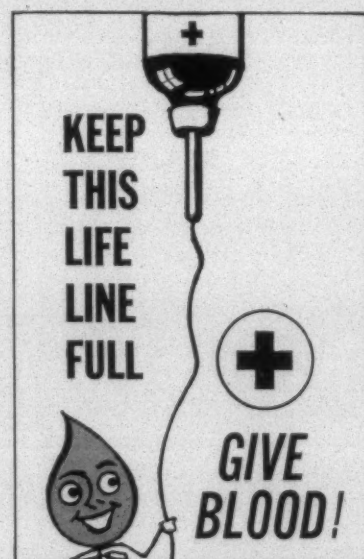
Mr. Still is building a new ranch-style house 128 feet long four miles out on "Park Cliff," a high wooded hill on which are a few other fine homes. The house is spacious and lovely in every detail, and was almost finished when I was there. The front overlooks Kingsport, and the back has a gorgeous lake view. Wish I had space and words to describe it. It is the only house I've seen with enough closets. I counted 11 and there may have been more. They haven't named this home yet, but witty Mrs. Still says they certainly won't name it "Still House." (Superintendent Roberts has a farm farther up the lake, and raises fine cattle.)

As soon as Mr. and Mrs. Still move into their new home, young Mr. John C. Borden Jr. of New York, son of the

chairman of the board of directors of Borden Mills, will move into the lovely home that the Stills have occupied for 18 years. Mr. Borden wants to learn textiles from the ground up.

I'll never forget this visit to Borden Mills nor the many courtesies extended by Mr. and Mrs. Still (who were expecting the stork), my dear friends, "Bill" and "Arlie." Mrs. Still and I rode all over Kingsport, and lunched at the best restaurant. One night, they invited Ben (my son) and me to join them for a grand steak supper in a private dining room at a noted place on the Bristol Highway.

And to top it all, they gave me several presents, including a bushel of the very best and finest Tennessee apples! If I were some years younger, I'd sell out and move to Kingsport, where it actually seems that everybody loves and is interested in each other.



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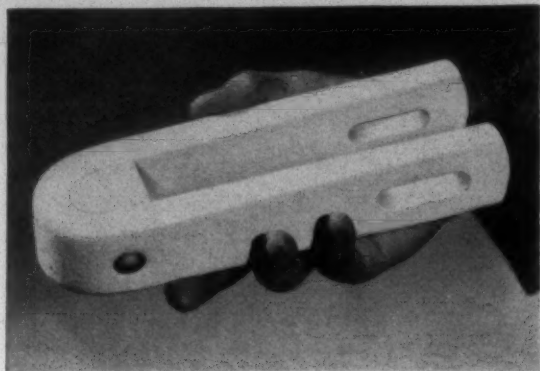
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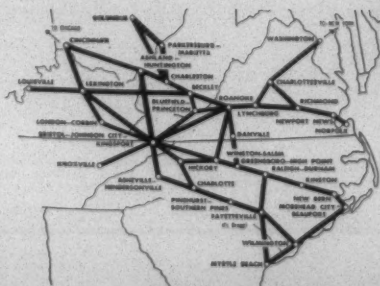
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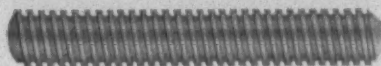
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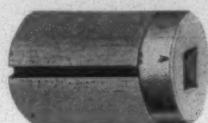


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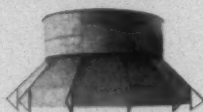
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## Pollack Retires From Thread Institute

F. L. Johnson of Belding, Hemingway Co. was elected board chairman of the Thread Institute at a directors' session following the group's 23rd annual meeting last month at the Hotel Commodore in New York City. Mr. Johnson succeeds Josef Pollack of Max Pollack & Co. who had been president and board chairman since 1935. David Snyder, executive director and secretary for the past 40 years, was re-elected to that post, and James B. Duffy, Gardiner Hall Thread Co., was re-elected treasurer.

Elected to the executive committee were J. Gottlieb, Threads Inc., Chicago, and Thomas F. Mahoney, Premier Thread Co., Pawtucket, R. I. Directors elected included Earl T. Groves, Groves Thread Co., for three years; Rowland N. Robinson, Robinson Thread Co., one year; and John C. Meyer, John C. Meyer Thread Co., one year.

In commenting on his retirement from active participation in the work of the institute, Mr. Pollack said that he was taking the step on the advice of his physician and the insistence of his family. Besides, he said, "I believe at my age it is time for me to make room for another man." Mr. Pollack was a charter member of the Thread & Yarn Manufacturers Protective Association formed in 1916, the first to be organized for the industry. He was president of this group until it was succeeded by the Thread Institute in 1933.

The program at the general meeting featured papers on "New Developments in Synthetic Fiber Sewing Threads," by Dr. D. G. Bannerman, group manager of the industrial merchandising division of the Du Pont Co.; "Thread and Sewing Machines," by Travis S. Whitsel, vice-president of Union Special Machine Co., Chicago; "The Washington Scene in Textiles," by Robert C. Jackson, executive vice-president of the American Cotton Manufacturers Institute, Washington; and a report on institute activities during the past year by David Snyder, executive secretary.

## Deans Ponder Critical Student Shortage

Two actions that are expected to do much to stimulate public interest in textiles and the textile industry were recorded at the Sedgefield Inn in Greensboro, N. C., at the recent semi-annual meeting of the National Council for Textile Education, which comprises the deans or presidents of the country's ten textile colleges and three graduate institutions.

The first action was approval by the National Council of a survey which will be a study of job opportunities in textiles and of the relationship of these textile colleges with the industries they are serving. Job opportunities at the higher levels are being stressed by the deans in appealing to the high school graduates of the nation as comparing favorably with all other industries and surpassing those of most.

Through this survey, which will be made by A. D. Little Inc. of Cambridge, Mass., young men will be given a clearer idea of these career opportunities, according to Dr. L. H. Hance, president of the Institute of Textile Technology, Charlottesville, Va., and president of the National Council.

Equally important was the formal recognition by the education committee of the American Cotton Manufacturers Institute of Washington, D. C., that this industry which is vital to the economic welfare of the nation as well as its security, is looking to these textile colleges for the future



leaders in this field. Textile colleges will have the wholehearted co-operation of the textile industry generally in keying curricula and other fundamentals in courses to rapid changes that are taking place, it was emphasized.

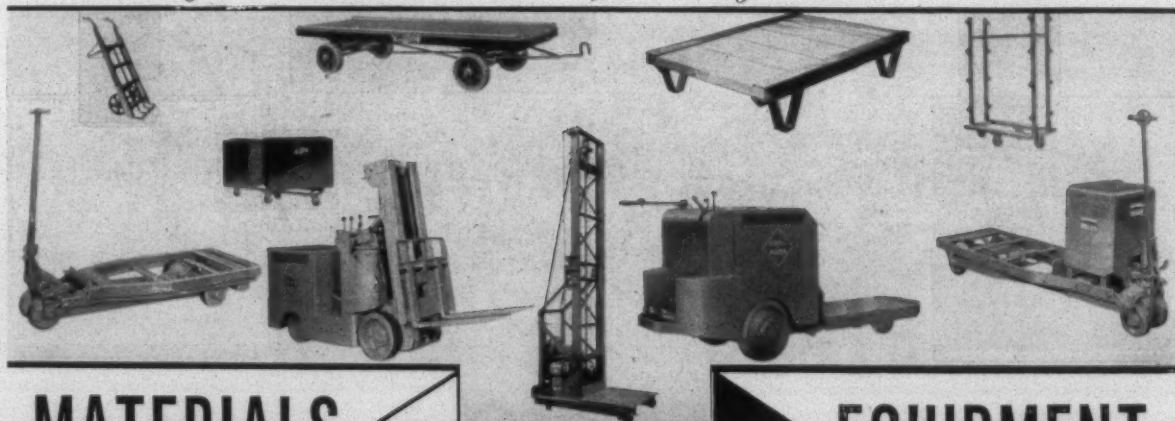
Julian Robertson, president, Erlanger Mills, Lexington, N. C., chairman of the A.C.M.I. education committee, said his committee would recommend a study of job opportunities from a different approach, to break down the number of textile jobs in the \$6,000 to \$8,000 a year bracket; in the \$8,000 to \$10,000 bracket; in the \$10,000 to \$15,000 bracket; and so on. This proposed study would also inquire regarding the type of men holding these jobs, and the character of training background which they have.

It was assumed at these meetings by the deans, as well as by mill executives who were present, that there would be sharp turnabout in the textile industry's public relations, starting almost immediately. Beyond any doubt, it was ventured by Malcolm Campbell, dean of the North Carolina

State College School of Textiles and chairman of the council's public relations committee, the determined efforts of the textile industry to thwart the heavy inflow of Japanese textiles during the past two years and to curb unfortunate publicity to some ills rather than the attainments of the industry had backfired in a number of ways, scaring young men from considering textiles as a career despite the opportunities for advancement to positions of responsibility and attractive compensation.

Speaking at a dinner session highlighting the three-day meeting, Marion Heiss, vice-president of Cone Mills Corp., told members of the council: "We are in the midst of a second industrial revolution. Textile manufacturing is becoming an exact science. The cycle of discovery and development, including revolutionary machinery, automation, new chemical elements and processes, is in its infancy. If we are to keep pace, we must do two things—stimulate the finest young minds to seek textile careers, and give them the

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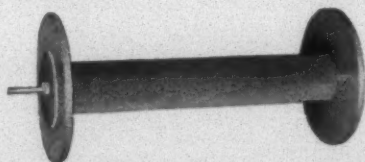
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training necessary to assume their proper roles in management of our industry."

Citing the concern of both industry and schools over the diminishing numbers of students enrolling in textile studies, Mr. Heiss gave as one of the reasons the difference in compensation standards in textiles as compared with other major industries. "I am sure we all agree that something needs to be done if we are to recruit and hold adequately trained personnel in our employment," he said.

Other reports heard at the meeting included those of J. Spencer Love, chairman of the board, Burlington Industries Inc.; Earl Heard, vice-president, West Point (Ga.) Mfg. Co.; Bertrand W. Hayward, president of the Philadelphia (Pa.) Textile Institute; Cleveland L. Adams, head of the school of Textile Technology, Alabama Polytechnic Institute, Auburn, Ala.; and R. C. Edwards, vice-president for development at Clemson College, Clemson, S. C.

In an election of officers, Dr. Martin J. Lydon, president of Lowell (Mass.) Technological Institute, was named president of the National Council to succeed Dr. Hance. Named vice-president was Cleveland L. Adams. Edward T. Pickard of the Textile Research Institute, Kent, Conn., was renamed treasurer, and Raymond K. Flege, head of the department of textile engineering, Texas Tech, was named secretary.

The council will hold its Spring 1957 meeting March 11-13 at Wilmington, Del., as guests of the Du Pont Co. The National Cotton Council will host the Fall 1957 meeting at Memphis, Tenn., at a date to be scheduled later.

**Gaston Institute Gets Firestone Donation**

Firestone Textiles Inc., Gastonia, N. C., has given three dormitory buildings, together with the land fronting on West Franklin Avenue in Gastonia, to the Gaston Technical Institute. The institute, presently located on West Airline Avenue in two buildings, has outgrown its quarters. The move into the new facilities, which will give the institute some 35,000 square feet of floor space, is expected to be completed about the first of the year. Between now and then, some \$40,000 in renovations are being made to the dormitory buildings.

**Small Firms Get Bulk Of Military Contracts**

Small business firms got 67.2 per cent of the prime military textile and clothing contracts in fiscal 1956, according to a summary made by the Office of Assistant Secretary for Supply and Logistics, Department of Defense. This was not the case in the procurement of such items as engines and other heavy equipment, where smaller firms got only a fraction of the contracts. However, in the production of clothing, the summary points out, large manufacturing establishments are not necessarily in a better position to meet contract specifications.

**Dates Set For Next Greenville Show**

The 20th Southern Textile Exposition will be held at the Textile Hall in Greenville, S. C., the week of Oct. 6-10, 1958, according to an announcement by Textile Hall Corp., managers of the show. The announcement also pointed out that applications for space in the 1958 show are now being taken.



## National Safety Congress Held Oct. 22-26

The National Safety Council sponsored its 44th annual National Safety Congress and Exposition Oct. 22-26 at Chicago, Ill., and the textile industry got its share of careful scrutiny in several of the papers presented.

One such paper was given by Frank W. Marcaccio, who currently heads the committee preparing a revised safety code for the textile industry. Mr. Marcaccio, chief of industrial inspection for the Rhode Island Department of Labor, declared in his appearance before the group that what ailing industries may need is a good dose of accident prevention. Analysis shows that profitable plants are those without excessive lost-time accidents, he said. "The most surprising fact in this analysis," he noted, "is that the plants operating profitably show a good-size budget for accident prevention."

Mrs. Ida C. Ayers of the industrial relations department of the Collins & Aikman Corp., Norwood, Ohio, reminded the congress that if it weren't for record-keeping—that element of industrial nursing that keeps the nurse busy filling out records while you suffer with your aches and pains—nursing science wouldn't be where it is today. She pointed out that a patient's chart aids not only in diagnosing and treating the patient at hand, but also leads over a period of time to the evolution of a more precise knowledge of symptoms.

For best safety inspection procedure, a suggestion was offered by C. Brooks Sossomon, superintendent of construction and maintenance, North American Rayon Corp., Elizabethton, Tenn., calling for the switching of territories by mill personnel. A weaver, for instance, could inspect the opening room and a spinner could be assigned to the power house. "An outsider can often spot conditions conducive to accidents which would normally be overlooked by personnel within the department concerned," the speaker pointed out.

## Textile Chief Execs Earned More In 1955

Textiles was one of the industries whose chief executives enjoyed above-average increases in compensation during 1955, according to this year's executive compensation survey by the staff of McKinsey & Co., management consultants. The increase in compensation for presidents of textile companies averaged 8.2 per cent compared with an average increase of 6.3 per cent for industry in general. The survey is based on executive compensation data filed with the Securities & Exchange Commission by 606 companies in 18 industries, including 25 major textile companies. An analysis of the survey findings by Arch Patton of McKinsey & Co. appears in the November *Harvard Business Review*.

Top executive compensation for industry generally was up sharply last year, Mr. Patton reports. Half of the 606 chief executives surveyed received larger paychecks in 1955 than in 1954, 35 per cent received the same, and only 15 per cent got less. Although one-fourth of the 25 textile companies in the study reported no change in the compensation of their chief executive, increases outnumbered decreases two to one among the remainder.

Compensation for the top man varied with sales and profits. Textile companies with sales of \$30 million paid the president an average of \$53,000; \$100 million enterprises paid an average of \$92,000; and \$500 million enterprises gave the chief executive \$192,000, the highest aver-



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age salary for any industry at this volume. When the organizations were grouped according to net profit, those returning \$3 million averaged \$90,000 for the president; those with profits of \$10 million, \$135,000; and those with profits of \$40 million, \$210,000. Here again, this was a higher average compensation than that of any other industry at the top profit level.

The textile industry pays its chief executives well above the average for industry in general, Mr. Patton reports. He finds that there is a tendency for industries maintaining higher-than-average presidential compensation to report higher-than-average presidential increases. He also reports that as a rule, industries reporting above-average compensation increases to the chief executives are among the biggest sales and profits gainers. Sales of textile companies in the study rose 20 per cent, compared with an average rise of 15 per cent for all companies. Profits of the textile organizations were up 72 per cent, compared with a 34 per cent rise for all 606 companies studied.

The 1955 compensation of the median second highest paid executive in the textile companies surveyed was 67 per cent of the top man's compensation, while the third highest paid man got 57 per cent and the fourth highest paid 53 per cent of the top man's pay.

### T.R.I. Raises Princeton Fellowship Stipend

Textile Research Institute, Princeton, N. J., has announced that the stipend for first and second-year T.R.I. fellows at Princeton University would be raised from \$1,200 to \$1,500 per year in keeping with increased costs of living. The \$1,800 stipend for third-year fellows will remain unchanged. All fellowships include tuition and fees in addition to the stipend, and are granted on a 12-month basis.

Textile Research Institute is supported by the textile industry and is devoted to basic scientific research in the textile field and to the promotion of scientific education. To implement the latter purpose the institute sponsors graduate fellowships in chemistry, chemical engineering and mechanical engineering at Princeton University. The fellows are regular graduate students and receive their degrees from Princeton University. Any research required for an advanced degree is done on an appropriate scientific problem which is also of interest in the textile field. The research is carried out in the institute's laboratories under the supervision of a member of the faculty of Princeton who is often assisted by a full-time member of the institute's staff.

### October Rayon And Acetate Shipments

October shipments of rayon and acetate filament yarn and staple+tow totaled 101,600,000 pounds, an increase of 17½ per cent over September but slightly below the 102,800,000 pounds shipped in October 1955, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc. October shipments were made up of 100,100,000 pounds for the domestic market and 1,500,000 pounds for export.

High tenacity rayon yarn shipments in October came to 29,900,000 pounds, a gain of 21½ per cent over September but 19½ per cent less than the 37,100,000 pounds shipped in October 1955. Regular+intermediate tenacity rayon yarn shipments last month totaled 16,800,000 pounds, a gain of 21½ per cent over September but five per cent below October 1955 shipments. Acetate filament yarn deliveries

in October amounted to 17,400,000 pounds, an increase of 29 per cent from the September level, and also slightly higher than the 17,300,000 pounds shipped in October 1955.

October rayon staple+tow shipments rose to 33,700,000 pounds from the September level of 26,600,000 pounds and showed a gain of 25½ per cent over shipments in October last year. Acetate staple+tow shipments rose 500,000 pounds over September to the latest level of 3,800,000 pounds. Total October shipments of rayon and acetate increased by 15,300,000 pounds over the previous month and production rose by 13,900,000 pounds; thus producers' stocks declined to the Oct. 31 level of 109,400,000 pounds.

United States imports of rayon staple, according to the *Organon*, totaled 6,210,000 pounds in September, a slight increase from the 5,916,000 pounds imported in August. Imports in the first nine months of 1956 totaled 69,152,000 pounds, or less than half the 141,345,000 pounds imported in the corresponding period of 1955. The U. S. imported 57,000 pounds of non-cellulosic man-made staple in September compared with 22,000 pounds in August and only 12,000 pounds in July. Total imports of this staple in the first nine months of the year amounted to 283,000 pounds, of which West Germany supplied 138,000 pounds, Italy 117,000 pounds, France 26,000 pounds and Canada and the United Kingdom 1,000 pounds each.

The *Organon* survey of U. S. man-made fiber production reveals that output in the third quarter this year amounted to 384,600,000 pounds, a decline 3½ per cent from the second quarter and 9½ per cent under the third quarter 1955 total of 426,100,000 pounds. Production in the third quarter of this year included 197,300,000 pounds of rayon, 56,400,000 pounds of acetate, 106,300,000 pounds of non-cellulosic man-made fibers and 24,600,000 pounds of textile glass fiber. Compared with the second quarter, rayon production declined by 28,500,000 pounds or 12½ per cent, acetate output increased 1,100,000 pounds or two per cent, non-cellulosic man-made fiber output increased 12,300,000 pounds or 13 per cent, and textile glass fiber production increased 2,100,000 pounds or 9½ per cent.

The *Organon* points out that regular+intermediate tenacity rayon yarn output in the third quarter amounted to 40,700,000 pounds, a decline of 17 per cent from both the third quarter of 1955 and the second quarter of 1956. Shipments of this rayon in the third quarter were slightly lower than production, and producers' stock at the end of September rose to 29,900,000 pounds.

Output of high tenacity rayon yarn in the third quarter totaled 83,700,000 pounds, a figure 11½ per cent less than the 94,500,000 pounds produced in the preceding quarter and 25 per cent less than the third quarter 1955 output. Production of this yarn, after holding at 112,700,000 pounds in the final quarter of 1955, has declined in each succeeding quarter. Shipments of high tenacity rayon yarn during the first nine months of 1956 totaled 281,000,000 pounds, a decline of 13 per cent compared with the corresponding period of 1955. Shipments in the latest quarter, however, were slightly greater than production and producers' stock declined to a total of 12,200,000 pounds at the end of the quarter.

Production of acetate filament yarn in the third quarter this year was 41,800,000 pounds, according to the *Organon*, a figure 5½ per cent over the second quarter but 22 per cent



below the third quarter 1955 level of 53,700,000 pounds. Cumulative production of acetate filament yarn came to 136,600,000 pounds in the January-September period, 21 per cent less than output in the corresponding period a year ago. Acetate filament yarn shipments in the third quarter totaled 41,000,000 pounds, two per cent below production, and producers' stock thereby increased to 21,600,000 pounds by the end of the quarter.

In the rayon staple-tow category, the *Organon* reports that production in the third quarter amounted to 72,900,000 pounds, a decline of 11½ per cent from the preceding quarter and 23½ per cent below the peak quarterly production that was reached in the first quarter of this year. The nine-month total, however, came to 250,600,000 pounds, an increase of 2½ per cent compared to the same period of 1955. As for acetate staple-tow, output in the third quarter came to 14,600,000 pounds, 6½ per cent under the second quarter but 22½ per cent over the third quarter of 1955. Production for the first nine months amounted to 45,000,000 pounds, a figure slightly above the 44,200,000 pounds produced in the corresponding period a year ago.

Data compiled by the *Organon* show that total shipments of rayon and acetate filament yarn in the third quarter amounted to 166,500,000 pounds, 1½ per cent below the second quarter level and 44,900,000 pounds or 21 per cent below the third quarter 1955 level. In the latest quarter, 81,600,000 pounds were shipped to the textile trades and 81,500,000 pounds went for tires and related uses. Exports in the quarter amounted to 3,400,000 pounds.

Filament yarn shipments to the textile trades in the third quarter declined one per cent from the second quarter and 18½ per cent from the third quarter 1955. Cumulative shipments of filament yarn for the first nine months this year were 277,000,000 pounds, 17 per cent below the corresponding period of 1955.

Tire yarn shipments in the July-September period at 81,500,000 pounds were down two per cent compared with the second quarter and 24½ per cent below the third quarter of 1955. Cumulative, nine-month shipments to the tires and related uses trade totaled 266,700,000 pounds, a decline of 14½ per cent from the comparable 1955 period. Exports of rayon and acetate filament yarn in the third quarter rose 17 per cent over the preceding quarter to 3,400,000 pounds and were 13½ per cent over the 3,000,000 pounds shipped in the third quarter 1955.

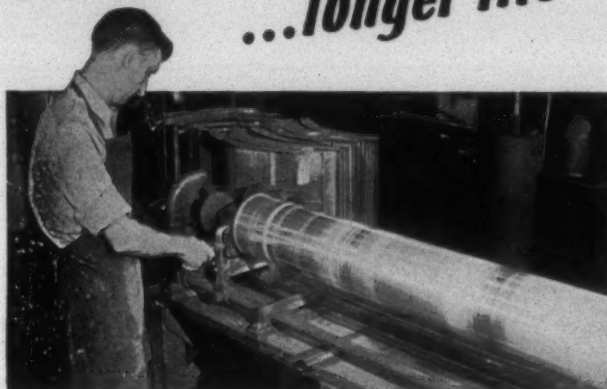
The knitgoods industry in the third quarter absorbed shipments of 11,800,000 pounds, up 8½ per cent compared with the second quarter but 20½ per cent below third quarter 1955 deliveries of 14,800,000 pounds. Shipments to the hosiery trade increased slightly in the third quarter and warp knitters received 1,000,000 pounds more than in the April-June period, while shipments to circular knitters declined slightly.

Shipments to the broad woven goods trade totaled 59,600,000 pounds in the third quarter compared with 61,100,000 pounds in the second quarter and 73,500,000 pounds in the third quarter of 1955. Acetate filament yarn, the *Organon* points out, continues to be the dominant cellulosic man-made fiber in the broad woven goods trade, accounting for 33,100,000 pounds or 56 per cent of total yarn shipments to that trade.

A total of 2,900,000 pounds of yarn were shipped to the narrow woven goods industry in the third quarter, and all but 200,000 pounds were rayon. Shipments of rayon and

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acetate yarn to miscellaneous trades amounted to 7,300,000 pounds, a slight decline compared with the preceding quarter and 15 per cent below third quarter 1955 shipments.

The *Organon* notes that production of non-cellulosic man-made fiber in the third quarter established a new record at 106,300,000 pounds. This figure was 13 per cent over the output of the preceding quarter. Non-cellulosic filament yarn output in the third quarter amounted to 71,900,000 pounds and staple+tow output came to 34,400,000 pounds. Textile glass fiber output in the quarter totaled 24,600,000 pounds, up 9½ per cent over the second quarter and 29½ per cent over the 1955 quarterly average of 19,000,000 pounds.

### Chicopee Mechanizes Paperwork

To assure better customer service by the prompt processing of orders, shipment of goods and billing, a new procedure of mechanized record-making has been installed by the Chicopee Mfg. Corp. under a system of integrated data processing. According to William St. John, systems analyst, this specially-designed system of data processing was the result of more than a year of intensive research, testing and standardization of forms. "It now co-ordinates the order-invoice activities between our mills, our sales office and our central office by an automatic teletype network," he stated.

The procedure reportedly assures maximum accuracy with minimum manpower through the simplification of paperwork and the elimination of repetitive operations. In addition, it provides for the automatic preparation of statistical records. The basic concepts of the integrated data processing system are: (1) the recording of original data in mechanical form; (2) its subsequent processing by completely mechanical methods; and (3) the integration of data in mechanical form to serve all future applications. These operations depend on the interconnected use of "common language" machines whereby the "native language" of one business machine is translatable into the "machine language" of another.

Chicopee's new procedure is based on the initial recording of customer master data on a five-channel tape created as a by-product of typing the customer's orders on Flexowriters. This data contains standard information relating to the customer and once it is stored in a visible record file in mechanical form, it no longer requires verification. This reduction of clerical routine assures a more accurate preparation.

When the customer's order is received at the New York sales office and incorporated with standard data, the following steps are effected simultaneously: (1) A specially-prepared order in which the bill of lading is an integral part is teletyped to the designated mill by automatic selection. (2) It is received at the New Brunswick, N. J., head office for monitoring of accuracy of teletype transmission. (3) Order copies affecting internal operations are received and immediately processed. (4) The IBM department receives a five-channel tape for the automatic preparation of accounting records on IBM cards. Invoicing is subsequently accomplished by the automatic operation of additional Flexowriters using the original tape.

### Wool Fiber Consumption—September 1956

The September rate of fiber consumption on the woolen and worsted systems was 14 per cent below the August rate

and approximately the same as in September 1955, according to the Bureau of the Census, U. S. Department of Commerce.

The weekly average raw wool consumption during September was 7,995 thousand pounds (scoured basis) or 12 per cent below the August level and two per cent above that of September 1955. The rate of consumption of carpet class wool decreased 12 per cent compared to the previous month and increased one per cent compared to September 1955, while consumption of apparel class wool was 13 per cent below the August level and two per cent above that of September last year.

Consumption of fibers other than raw wool averaged 5,080 thousand pounds per week, or 16 per cent below the August level and three per cent below September 1955.

### Corn Refiners Act On Freight Rates

The Corn Industries Research Foundation has announced the formation of a new transportation committee to deal with inconsistencies in freight rates as they now apply geographically and to various commodities. The foundation contends that these inconsistencies are creating "increasingly difficult" problems for the corn-refining industry. The new committee recently held its initial meeting in Chicago. William T. Brady, foundation president, said that farmers in the Corn Belt and users of corn products stand to benefit by greater uniformity and equity in freight rates.

The committee will undertake a full review of transportation legislation, Mr. Brady said, and will present the collective view of the corn refiners on transportation questions. Among immediate needs are freight-rate adjustments on corn starch to the identical level of rates on other grain products; and uniformity of ocean freight rates on corn flour and corn starch. Mr. Brady also emphasized the importance of adjusting freight rates on starch to meet competition from imported tapioca and domestically produced potato starch. He noted that the U. S. textile industry prefers to use corn starch and other American corn derivatives, yet certain freight-rate increases now being considered may force greater use of tapioca and other foreign starches.

### A Report On Cotton Breeding Research

Cotton plants producing lint in various hues of green and brown turned out to be a sort of economic wisp. Some mills were intrigued by the idea a few years ago, thinking that such cottons might be a means of reducing dye costs. The geneticists or plant breeders came up with the green and brown colored lint cotton, but it turned out they weren't practical. The color faded upon exposure to sunlight and uniform coloring could not be maintained. And the brown cottons were too weak to spin.

These cottons, however, are still grown at the Delta Branch of the Mississippi Agricultural Experiment Station in Stoneville, Miss. And there too are grown cottons with red and yellow foliage in Midsummer, not to mention a cotton plant which has naked seed. And, as for size, there's everything in cotton plants from dwarf size to tree size.

At the Stoneville station, a sort of "gene bank" for upland cotton, are grown some 700 different cotton strains and varieties, as unusual a collection as probably is to be found anywhere in the world. Such a project serves many purposes, not the least of which is to preserve older cotton varieties, even though they are no longer commercially



grown, for they possess certain desirable characteristics or qualities which might have special value in new phases of cotton research. And at the same time the project provides a source where research workers can obtain a limited seed supply of any stock desired.

The "gene bank" was established at Stoneville by the government in 1947 to maintain a comprehensive collection of stocks of Mendelian characters, principal commercial varieties and selected inbred lines of upland cotton, and to prevent the loss of materials as well as avoid the duplication of effort in maintaining character stocks.

Cotton, in tree or shrub form, is far older than recorded history, man having learned to spin and weave by crude methods before he learned the art of writing. In a wild state cotton grew to a tree-sized height of more than 15 feet. When Columbus came to America in 1492 he found cotton growing on "trees" in the West Indies. Three hundred years later cotton was still grown on trees in the West Indies and only the crudest imaginable methods used to separate the lint and seed and spin the fiber into yarn. In Peru not long ago cotton cloth was found on a mummy estimated to be over 5,000 years old and the fine fabric still showed good tensile strength. For cotton, under some conditions, is virtually an imperishable commodity.

The common type of cotton grown in the United States is, of course, American upland and was originally brought in from Mexico. The same type has in turn been introduced into China, Russia, Argentina, Peru, India and other countries, where it underwent hybridization and mixing with native varieties.

Government and private geneticists or plant breeders are at work constantly developing new or improved varieties to meet specific objectives, in addition to increasing yield—such as earlier maturing varieties to thwart the boll weevil (also a visitor from Mexico), to provide a cleaner lint under conditions of machine-picking, and the like.

In 1956, according to the U. S. Department of Agriculture, four general varieties of cotton accounted for nearly three-fourths of the U. S. cotton acreage—Coker 100-W the main variety in the Southeast, Deltapine in the south central part of the Belt, Lankart in the Southwest and Acala in the Far West. Yet a quarter century ago there was a hodgepodge of 500 cotton varieties planted in the United States. For it wasn't until the early part of this century that the inheritance laws of the Austrian monk, Gregor Mendel, were rediscovered and put to work by the pioneer cotton plant breeders in the United States.

Without the use of Mendel's laws and mathematical charts there would probably be very little cotton grown in this country today. What is considered the most fabulous variety of cotton ever cultivated, Sea Island, grown by planters along South Carolina and Georgia coast, is now extinct, for all practical purposes, as it couldn't be economically grown after the boll weevil came in the 1920s. But the breeders developed earlier maturing varieties which can be picked before the weevil gets in his worst damage. And they have developed certain varieties which are resistant to certain very common cotton plant diseases. Also, the new variety now planted to a limited degree in the Far West, Supima, is very much like the old Sea Island.

What is needed most urgently now, of course, is a variety of cotton with a trash-free plant, which is highly desirable under conditions of mechanical harvesting. And there has been some indication that the breeders are on the verge of

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reaching that goal, thought for so long to be unattainable. A wild, lintless strain now seems to have provided them with a needed gene for breeding cotton varieties with such smooth leaves and stems that all trash is easily removed from the lint even though the cotton is machine-picked, as much of today's cotton is.

Dr. J. R. Meyer, geneticist of the U. S. Agricultural Research Service, and the Mississippi Agricultural Experiment Station are co-operating in developing a new experimental hybrid variety of cotton which, for all practical purposes, seems to be free of leaf stem and bract hairs. Crossing and recrossing the wild, smooth-leaf variety with an upland commercial hairy-leaf variety, they have bred a new variety that apparently has no undesirable characteristics genetically linked to the new quality of leaf-smoothness. Rushing the project as much as possible, two generations of hybrid plants are produced each year, one crop being grown in the U. S. and another during the hot months in Mexico.

So-called "pepper trash" is always found on machine-picked commercial cotton. Extra lint-cleaning is expensive and even so it often lowers the grade. Thus a trash-free cotton variety would cut production expense and at the same time prevent widespread downgrading under mechanized conditions. Its advent on a commercial scale would be of tremendous economic significance. So far, the researchers report, tests for lack of trash in the progeny bred for smoothness continue to look good. Work has proceeded so rapidly in transferring the smooth-leaf characteristic that adequate tests for yield are as yet unavailable, but critical tests are planned for the current season.

### Recent Textile Patents To Carolinians

Patent No. 2,758,041 for "methods of cleaning floors in textile mills" has been granted The Denning Co. of Albemarle, N. C., upon application of Wade F. Denning of Albemarle. This invention pertains to cleaning of floors of textile mills and the like to prevent the accumulation of short fibers, lint and any loose foreign matter from beneath rows of twister frames, spinning frames, winders and other textile machinery wherein the bottom portions of the same are not enclosed.

Ira L. Griffin Sr. of Charlotte, N. C., has been issued Patent No. 2,763,912 for an invention of an apparatus for applying starch and the like to textile yarns and is concerned, especially, with an improved hood or cover for the size box of a slasher in a textile mill. This particular hood or cover is utilized to prevent starch from congealing on the rolls and associated parts of the size box and permits more accurate and even application of starch and the like and faster operation of the slasher and reduces the amount of waste, which waste has heretofore been of considerable quantity.

George W. Sarti of Black Mountain, N. C., has been granted Patent No. 2,764,009 for his contrivance which involves an apparatus for the liquid treatment of cloth and other materials in web form, and means are provided for advancing the cloth through a tank under a minimum of tension or in the relaxed state while using a minimum of treating solution and while maintaining the liquid dyestuff or other treating solution in the tank under predetermined constant temperature.

Patent No. 2,764,367 has been granted Fieldcrest Mills

Inc. of Spray, N. C., upon an application of Frank W. Brey of Spray for an invention which relates to a method and means for maintaining tension in and removing the slack from individual yarns wherein each yarn engages a wheel or pulley driven by an individual motor which tends to rotate the pulley in the opposite direction from that in which the yarn is pulled, so the yarn must overcome the torque of the motor as it is pulled. When the pull on the yarn is interrupted, such as by yarn breakage, the pulley then rotates in the opposite direction to take up the slack in the yarn. A group of such motors are controlled by a variable voltage control whereby the amount of torque in the pulleys and, consequently, the amount of tension in the yarn is accurately controlled.

### The Cotton Contests—What They Mean

A significant thing in the cotton industry in recent years, of course, is the fact that the center of production has moved westward across the Mississippi. However, the Southeast or the older cotton belt still produces about as much cotton as 25 years ago, and on about half the acreage, thanks to better varieties of cotton and improved practices all down the line. It produces even more cotton per acre than it did in the days before the advent of the boll weevil.

The cotton improvement story is a dramatic one, and the part that the various state cotton improvement contests have played in it cannot be too fully appreciated. It won't be too many weeks before the 1956 winners in the various Southeastern states will be announced. Right now, in fact, the real work in the complicated job of determining the winners is underway, and it is a tedious task indeed.

If you have ever stopped to wonder just how the agricultural extension people determine who wins these contests, the answers may be a little surprising. It's a matter of counts and recounts and checks and double-checks, and the autumn months find the specialists in charge of this work literally up to their ears in figures, averages, percentages and computations. When they get through with it all, though, there's not much possibility of error.

As an illustration, take the Five-Acre Contest in South Carolina, which is the oldest of such contests, having been started in 1926 and having been held every year since except for 1932 and 1933, the depression years. Contestants must sign up with their county agents by July 1 and it is the county agent who makes the first check of a contestant's field. A district man designated by the extension service makes a second check. Then the extension service specialist at Clemson College in charge of the contest makes the final check.

And here is what one who checks a five-acre plot must do: First, he measures off 20 feet between two rows and counts the number of stalks on those two rows. Then he counts the bolls on these stalks and measures the width between rows. Next he picks 50 bolls from each of five average areas in the field. These 250 bolls are put in a bag and the bag is tagged and sent to Clemson. These bags are stored at Clemson so that each bag will have the same moisture content.

Next, each bag is weighed, and then ginned on a miniature gin. The weight of the cotton seed is deducted from the total to get the lint weight. Then a handful of cotton from each bag is sent to the cotton branch of the U.S.D.A. Marketing Service in Columbia where it is tested for staple



length. And then comes the complicated job of computation, wherein the percentage of lint weight of each sample is figured as well as the number of bolls required to produce a pound of cotton.

The field count has determined the number of bolls on a 40-foot row length. If the row width for a contestant's field is 39 inches, for instance, a table shows this row width factor is 335. So 335 is multiplied by the number of bolls per 40 feet and the result is divided by the number of bolls per pound. In this manner is determined the amount of seed cotton per acre.

Suppose, for instance, a contestant's 250 bolls weigh 3.26 pounds—two pounds of seed and 1.26 pounds of lint. The percentage of lint cotton is 39. There are 77 bolls per pound, 455 bolls per 40 feet and the row width is 39. This would make 1,979 pounds of seed cotton per acre and 772 pounds of seed cotton. This is multiplied by five to get the contestant's yield on a five-acre plot. It's a complex formula, but those who have actually weighed the cotton from their five-acre tracts have reported it to be remarkably accurate and foolproof.

Wherever these contests are held, the cotton manufacturers support them and contribute a large part of the prize money. It is especially worth noting that since the Five-Acre Cotton Improvement Contest in South Carolina was organized back in 1926, the average yield per acre in South Carolina has doubled. And a quarter century ago less than 50 per cent of cotton in South Carolina was 15/16 inch and longer, whereas today well close to 100 per cent of the crop is one-inch or longer.

The story is relatively the same in other states of the rain-grown belt—a story of co-operation on the part of the breeder, the grower, the manufacturer, the extension service and the county agents. For instance, a survey was made in 1949 by the extension service in co-operation with the South Carolina Textile Manufacturers Association to determine just what staple lengths South Carolina mills used.

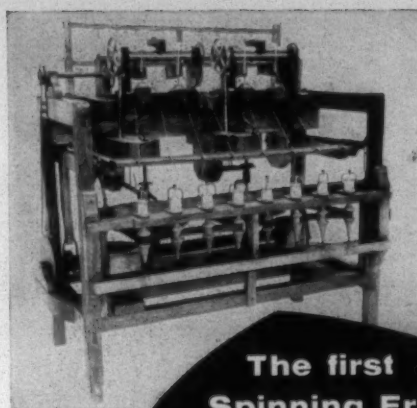
The survey showed that 93 per cent of the cotton consumed in South Carolina was in lengths of one inch to 1 3/32 inches inclusive. South Carolina mills can and do spin within a range of three lengths and therefore can use virtually all of the state's production within their spindle range provided the grades are those that they desire. The same, however, was anything but the case 25 or 30 years ago.

### Business Survey Points To Good 1st Quarter

Continued high levels of net sales, net profits and employment together with higher selling prices are indicated for the first quarter of 1957 as compared with the first quarter of 1956, according to the Dun & Bradstreet's quarterly *Survey of Business Men's Expectation*.

The survey was conducted over the period, Sept. 24 to Oct. 5 by the credit reporting agency's staff of analytical reporters in interviews with a random, cross-section of 1,597 executives of larger and medium-sized manufacturers, wholesalers and retailers across the country. Executives were asked how they thought dollar sales, net profits after taxes, selling prices, level of inventories, number of employees and manufacturers' new orders for the first quarter of 1957 would compare with the same period of 1956.

The survey shows that 60 per cent of all business executives interviewed expect higher sales for the first quarter of



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1957 compared with the same period this year; 34 per cent expect no change from the generally high level of this year's first quarter sales and six per cent anticipate lower sales volume for their businesses. At the same time, 43 per cent of those interviewed expect higher net profits; 51 per cent anticipate no change and six per cent look for lower profits for the first quarter of 1957 compared with the first quarter of 1956.

The expectation of continued high levels of employment for the first quarter of 1957 as compared with the same period this year is indicated. Of those interviewed, 15 per cent anticipate a larger number of employees for their businesses, 82 per cent expect no change from the generally high level prevailing in the first quarter this year and only three per cent believe that a smaller number of employees will be required.

In their price projections, 42 per cent of the executives interviewed expect higher prices for their products in the first quarter of 1957 than in the first quarter of 1956; 56 per cent expect no change and two per cent anticipate lower prices. The 42 per cent expecting higher prices is as high or higher than any such figure since the April 1951 survey, when expectations for the third quarter of 1951 were compared with the lower prices which prevailed in the third quarter of 1950 at the start of the Korean War.

Of the various types of businesses represented in the present survey, 49 per cent of the manufacturers of durable goods and 32 per cent of the manufacturers of non-durable goods expect higher prices for their products in the first quarter of 1957 as compared with the first quarter of 1956. Of the retailers, 39 per cent expect higher prices, 60 per cent anticipate no change, and only one per cent believe there will be lower retail prices in the first quarter of 1957. Of the wholesalers, 46 per cent expect higher prices, 51 per cent no change, and three per cent lower prices for the first quarter of 1957 as compared with this year's first quarter.

No change in the level of inventories is expected by 61 per cent of the business men interviewed, 29 per cent anticipate higher inventories, and ten per cent lower inventories for their businesses for the first quarter of 1957 as compared with the first quarter of 1956.

Increases in new orders for the periods under comparison are anticipated by 55 per cent of the manufacturers consulted, 41 per cent expect no change, and four per cent believe their volume of first quarter new orders will be lower than they were for the same period a year ago. Of the two classifications of manufacturers, 56 per cent of those manufacturing durable goods expect an increase in new orders as against 53 per cent of the manufacturers of non-durable goods.

### Cherokee Refuses To Aid In Gingham Probe

The U. S. Tariff Commission, seeking information regarding the effect imported Japanese gingham have had on the U. S. market, has been flatly denied this information by Cherokee Textile Mills, Sevierville, Tenn.

Cherokee was one of 25 firms the commission requested information from, and A. G. Heinsohn Jr., president and general manager of Cherokee, sent this reply:

"In reply to your various letters and your telegram of Nov. 6, please be advised that this company does not intend to waste two seconds in filling out your voluminous forms.

"Is there any question that the Government in Washing-



ton uses the money seized from us to buy cotton from American growers through a procedure called a loan?

"Is there any question that the Government in Washington sells this same cotton to the Japanese at ten cents per pound less than we can buy it back from our own Government?"

"Is there any question that Japanese mills pay wages about one-tenth the wages paid in American textile mills?"

"Is there any question that the Government in Washington permits Japanese mills to ship into this country, duty free, all the cloth they decide to?"

"Is there any question that this takes business away from American textile mills?"

"What more do you want to know?"

The commission has made no official comment on Mr. Heinsohn's telegram, but an unidentified source has reported that should the commission feel that this information from Cherokee is needed to complete the report, the commission could issue a subpoena to force Cherokee to fill out the forms provided. If the commission's technical experts feel they can do without Cherokee's help, on the other hand, it is likely the commission would simply ignore the refusal to comply and let the matter drop.

#### Barrie New Carolina Yarn Assn. President

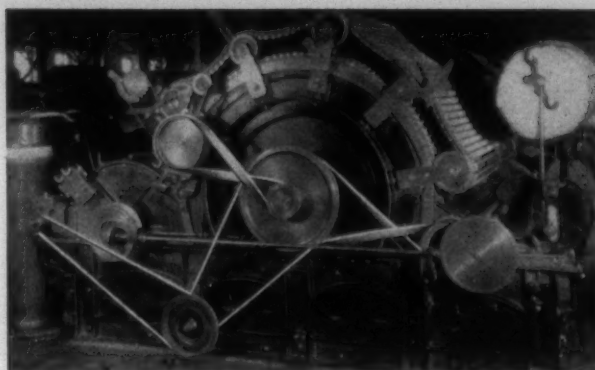
Frank P. Barrie of Charlotte, N. C., district manager for Universal Winding Co., has been elected president of the Carolina Yarn Association. He succeeds Frank Causey of American Thread Co., Greensboro, N. C. Other 1956-57 officers include Henry Stokes, Cosby & Thomas, Charlotte, vice-president; Masten R. Dalton, Chemstrand Corp., Charlotte, treasurer; and John C. Thompson, the Du Pont Co., Charlotte, secretary.

#### Narrow Fabrics Institute To Meet Nov. 26-27

The Narrow Fabrics Institute will hold its annual meeting at the Hotel Roosevelt in New York City on Monday and Tuesday, Nov. 26-27, according to Russell J. Neff, president. Meetings of both the webbing and tape sections will be held on the first day to review the status of present activities, including product promotion, statistics, standards and government specifications. C. W. Moore, vice-president of Fletcher Works Inc., Philadelphia, Pa., will address the Monday luncheon session, speaking on "Equipment Modernization." This will be followed by a talk on credit by a representative of the National Credit Office. Tuesday activities will include meetings of the institute's board of directors and the government specifications committee.

#### Not Too Short—Just Too Round

A New England textile mill employee who couldn't do his work because he was too fat is entitled to unemployment compensation, according to a recent ruling given in Connecticut. The unidentified worker, five feet four inches tall and weighing 195 pounds, was assigned to a job which required him to pick up scrap from the floor and put it in a picker about four feet above the floor. He quit after one day, and unemployment officials ruled he left his job with sufficient cause. As they saw it, he wasn't too short for the job, but too round.



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## Klopman Scholarship At N. C. State

A four-year scholarship with a value of \$500 per year has been established at the School of Textiles, North Carolina State College, by Klopman Mills Inc., Asheboro, N. C. The scholarship will be awarded to an employee or a son or daughter of an employee in any of the Klopman plants, according to K. H. Boydell, vice-president.

The purposes of the scholarship are to promote more interest in textiles, self development, and to offer financial assistance to those who desire higher educational training. Any child of an employee or any employee interested in textiles is eligible, Mr. Boydell said.

In commenting on the announcement of the scholarship, Dean Malcolm E. Campbell of the School of Textiles, said: "We are pleased to have the Klopman scholarship. Through the establishment of such financial aid to young people, the supply of technically trained men for careers in the textile industry will be insured."

## Rayon Back In Fiber Race, Says Factor

The word rayon may lack some of the luster of other names on the growing roster of test-tube fibers—but it is said to be staging a spectacular comeback. "Make no mistake about it, rayon is in the running as a synthetic fiber of real importance," says Edward F. Skinner, a specialist in textile financing. "The rayon people have never made better fabrics than they are making today, and these fabrics are highly styled and are being continually improved—even in the matter of washability."

Mr. Skinner, who is vice-president of the old-line factoring firm of Meinhard & Co. Inc., attributes the new importance of rayon to the product research that has been carried on by both rayon producers and their raw material suppliers. "They have created fabrics that offer new and wider use in the apparel field," he points out, "and they have also planted their feet firmly on the rug and carpet industry. At the same time, non-woven fabrics for industrial applications are more popular today than at any other time." He believes that the relatively low cost of rayon is a big advantage, along with the fact that the basic raw material—chemical cellulose—can be produced almost anywhere in the world.

## Charlotte Textile Club Hears Roberts

Members of the Greater Charlotte Textile Club have been asked to help solve some of the state problems facing the textile industry. John C. Roberts, president of Textiles Inc., and head of the North Carolina Textile Manufacturers Association, said in a luncheon address Nov. 19 some of the more pressing problems were the need for increasing textile school enrollment, obtaining an equitable tax structure and maintaining a legislative program.

In appraising the tax system, he said three things must be kept in mind: The tax structure should encourage industry to operate at the highest level on a full-time gainful basis; it should be competitively attractive to new industry; and it should be conducive for those industries already in North Carolina to expand inside rather than outside the state.

He labeled "of utmost importance" the need for textile and allied industries to take steps to correct the decrease in textile school enrollment.



The North Carolina State College School of Textiles graduated 303 in 1949, he reported. This year, in the face of growing demand, textile graduates at the school dropped to 112. "We need approximately 500 textile graduates each year to supply the demand," Mr. Roberts said. "Unless something is done immediately we will be facing a serious shortage of future management in the textile industry."

A slate of officers for 1957 was presented by Herbert Woodward of Southeastern Factors. Nominees are: David Johnston, Johnston Mills Co., president; Don Hamilton, Comer Machinery Co., first vice-president; Alex Savage, Kendall Cotton Mills, second vice-president, and Demont Roseman, *Charlotte Observer*, secretary-treasurer.

### Product Development Commercialization

A special conference on commercializing research results will be conducted for some 300 executives at the Hotel Roosevelt, New York City, Jan. 10-11, by the American Management Association. Speakers will cover the theme of profiting from new product development by describing their companies' programs, presenting detailed case histories, and analyzing the problem areas in product development.

Two panel groups to be featured are from Westinghouse Electric Corp. and E. I. du Pont de Nemours & Co. Inc. Luncheon speaker is Morehead Patterson, president and chairman of the board, American Machine & Foundry Co. He will review basic long-range growth opportunities. Other topics to be included at the conference are the commercial significance of technical trends, projecting profitability of new products, translating laboratory results into commercial products, developing new product ideas, and nuclear technology and its end-products.

The first truly man-made fiber was nylon, the earlier rayons having a cellulosic base. Nylon came about through the application of scientific methods to a theoretical concept. Du Pont, when it began its high polymer research didn't go out deliberately to discover nylon, though the company did have in mind the strong probability that by developing the proper type of high polymer, it might be possible to develop a completely new and different material suitable for the manufacture of a textile fiber. By investigating many possibilities and by following through on those that showed promise, the whole series of polymers forming the generic families of nylons resulted. As a commercial product, nylon is only 17 years old.

The first cotton mills in America were operated by teams of mules driven around turnstiles, such as the mule-powered mill in Beverly, Mass., built in 1777, a little over a decade before Samuel Slater built his water-powered mill in Pawtucket, R. I. Later came water power and steam power, then electric power. Until after 1890, electric motors installed in cotton mills were direct current units not above 21 horsepower. The first direct current generators generally proved to be unsatisfactory. The first mill to be completely operated by electricity—with 17 alternating current induction motors of not 21, but 65 horsepower, each, and suspended from the ceiling rather than resting on the floor, was the Columbia Mills in Columbia, S. C., in 1894. The power was provided by two 500-kilowatt three-phase, alternating generators. The transmission line was 800 feet long.

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### Improvements Seen For Woolens & Worsteds

The woolen and worsted sections of the textile industry were described earlier this month by Herman D. Ruhm Jr., president of Burlington Industries, as being in an excellent position to show substantial improvement in both sales and earnings.

Speaking before the collateral group of the National Association of Wool Manufacturers, Mr. Ruhm stated that this bright picture exists because, more than any other segment of the textile industry, the woolen and worsted branches currently have the necessary climate as well as merchandise for making an adequate return on investment.

He cited as two of the major factors supporting his "bullish" position the decline in productive equipment, and a currently healthy balance between supply of raw material and demand adequate to needs, but not burdensome. And, in addition, he pointed out the largely unexplored and promising area of blends of natural and synthetic fibers which offers the woolen and worsted industries the opportunity to expand and create new markets. "The potential (of blends) has merely been scratched and the full development of this field offers potential rewards that are difficult to estimate," he said.

At the same time, he stated, this source of new raw materials, the man-made fibers, should eliminate cause for alarm at the failure of raw wool production to keep pace with increasing population. "The raw material base, therefore, is a healthy one," he said, "but it is appropriate for the woolen and worsted industry to examine productive capacity in relation to present and potential demand for the products of our specialized machinery. We find some very startling facts that, though pretty well known, have not been fully appreciated."

In discussing relative strength of woolens, as compared to worsteds, Mr. Ruhm stated that style factors are responsible for the fact that woolens are stronger today than worsteds. "It seems to me," he said, "that woolens will undoubtedly retain their present strength for some years to come and that worsteds are moving into a climate marked by steady improvement." He urged both segments to give impetus to this direction through the medium of merchandising and promotional programs which take full advantage of favorable factors within the consumer market.

"The economic well-being of the average American and his way of living have combined to make it possible for the automobile industry to put two cars in a tremendous number of garages. It is even more apparent that we need two wardrobes, a leisure and a dress-up wardrobe."

In his opinion, the textile industry has done a poor job of selling this concept, and as a matter of fact, he said, "we have not even done a very good job of selling the idea of the need of one wardrobe. But the job can be done, and it is up to everyone in or affiliated with the woolen and

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worsted business to put this two-wardrobe concept across to our customers. If we are successful in achieving this, and if we price goods in terms of all factors involved, keep prices firm and take orders that show reasonable return on investment, then we will profit as a result."

## Cotton And Synthetic Staple Consumption

Total cotton consumption during the month of September amounted to 822,180 bales, according to statistics released by the Bureau of the Census, U. S. Department of Commerce. This was a sizeable increase over the 686,275 bales consumed in August, but some 51,558 bales less than the 873,738 bales consumed in the month of September 1955.

Daily average consumption amounted to 32,887 bales, all of which was consumed in the cotton-growing states with the exception of 1,454 bales consumed in New England. Daily average consumption during August was somewhat higher at 34,313 bales. September a year ago daily average consumption totalled 34,950 bales.

Total stocks on hand at the end of the month of September amounted to 15,178,989 bales. This compares with 13,110,069 bales at the end of August 1956, and 13,049,350 bales at the end of September 1955. Of the 15,178,989 bales on hand at the end of the month, 899,280 were at consuming establishments, and 14,279,709 bales were in public storage.

Cotton system spindles in place on the last day of September totalled 21,688 thousand, of which 20,308 thousand were classified active. Active spindles during the month were operated a total of 11,436 million hours, or at 131.8 per cent of capacity.

Foreign cotton consumed during September totalled 5,696 bales. This compares with 5,956 bales consumed during August 1956 and 12,925 bales consumed during September 1955. Stocks of foreign cotton amounted to 29,071 bales at the end of the month, down from the 34,138 bales at the end of August, and considerably below the 48,266 bales on hand at the end of September 1955.

Synthetic staple consumed during September amounted to 37,973 thousand pounds, with 48,914 thousand pounds on hand at the end of the month. Consumption during the month of August 1956 was 36,140 thousand pounds, with 52,515 thousand pounds in stock on Aug. 31. September 1955 consumption of synthetic staple totalled 45,925 thousand pounds, with a stock of 72,121 thousand pounds on hand at the end of the month.

Breaking down the daily average consumption of cotton by states in the cotton-growing area for the month of September 1956 shows North Carolina leading with 9,706 bales followed by South Carolina with 9,066. Following in order were Georgia (6,452), Alabama (3,656), Virginia (796), Tennessee (646) and Texas (487).

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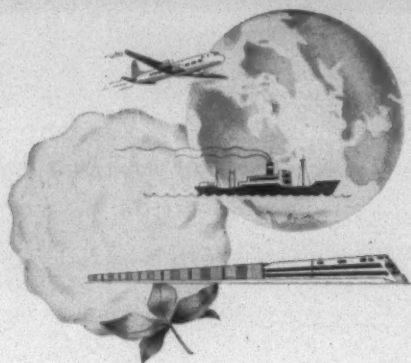
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# Before Closing Down

— TEXTILE INDUSTRY HAPPENINGS AS THIS ISSUE WENT TO PRESS —

## PERSONAL NEWS

W. W. Holmes has been appointed general sales manager of Progressive Engineering Inc., Rockland, Mass., manufacturer of anti-friction top rolls and top roll maintenance equipment. Outside of a 2½-year hitch in the U. S. Navy, as a lieutenant, Mr. Holmes, for the past quarter century has been identified with the machine tool industry both in sales engineering and sales management.

The appointment of Dr. Eugene Allen as a group leader in the dyes research section of the Bound Brook (N. J.) Laboratories of the American Cyanamid Co. has been announced by Dr. Joseph H. Paden, director of the laboratories. A research chemist with the American Cyanamid Co. since 1945, Dr. Allen will supervise a group which is primarily concerned with dye application research and the preliminary evaluation of new products in this field.

Abraham M. Sonnabend, chairman of the board and president of Botany Mills Inc., has been appointed chairman of the development program for the American Jewish Institute of Human Relations. The major goal of the program is to construct a \$1,500,000 building in New York City.

Cloyce L. Purdom has been named to the newly-created post of market research manager for the general sales division of the Chemstrand Corp., effective Dec. 1. Mr. Purdom moves to the sales division in New York City after more than a year as assistant to the president of the chemical textile fiber firm at its corporate headquarters in Decatur, Ala. He previously was in the market research department of Chemstrand's research and development division at Decatur.

Edward J. Baxter has joined Dexter Chemical Corp. as technical sales representative for textile chemicals in Virginia and North Carolina. Mr. Baxter, before entering sales work with the E. F. Drew Co., had 32 years of textile mill experience in New England and the South. He was superintendent at plants of U. S. Finishing Co., United Merchants and Burlington Mills. Born in Providence, R. I., Mr. Baxter is married, has three children and makes his home in Greensboro, N. C.

E. L. (Sam) Rodgers has been named sales representative in Georgia and Alabama for Emkay Chemical Co., Elizabeth, N. J. Mr. Rodgers, formerly with Augusta (Ga.) Chemical Co., will make his headquarters in Sylacauga, Ala.

William H. Suttentfield Jr. has been placed in charge of liaison between the New York merchandising organization of M. Lowenstein & Sons and its greige goods

mills. Mr. Suttentfield joined Lowenstein in 1949 and has assisted Everett C. Drake in liaison. Mr. Drake has been named controller for the company.

Eugene Langford, second hand of spinning in the Walway Plant, Callaway Mills Co., LaGrange, Ga., has been promoted to overseer of twisting and winding at the plant. Mr. Langford has been with the company since 1946, and had been second hand of spinning since last February.

Harry E. New of Greenville, S. C., has been named superintendent of The Virginia Woolen Co., Winchester, Va., a unit of United Merchants & Manufacturers Inc. Previously Mr. New has been with Burlington Mills Corp., American Viscose Corp. and The Chemstrand Corp. in management capacities.

Robert G. Thomas has been named manager of the textile chemicals department, Rohm & Haas Co., Philadelphia, Pa. Mr. Thomas has been active in this post for some time due to the illness of W. J. Thackston Jr., whom he now succeeds.

Dr. Edward A. Murray, textile consultant of Anderson, S. C., will become director of instruction in the School of Textiles at North Carolina State College, effective Jan. 1. Dr. Murray will succeed the late Prof. Thomas R. Hart, who died last Jan. 10 after serving on the college faculty for 36 years. In his new position, Dr. Murray will serve as a staff adviser to Dean Malcolm J. Campbell, primarily on undergraduate education and to some extent on graduate-level education. A native of Tacoma, Wash., Dr. Murray received his B. S. and M. S. degrees in chemical engineering at the University of Washington. He received his doctorate in chemical engineering from the University of Texas. Past associations include a position as research associate with the National Cotton Council of America; and head of the chemical research division of Deering Milliken Research Corp., Pendleton, S. C. He has been an independent consultant since 1952.

Frederic W. Howe Jr., president of Crompton & Knowles Corp., Worcester, Mass., has been re-elected president of the New England Council, a group devoted to the business and industrial interests of the New England states.

George E. Paules has been appointed director of manufacturing for A. & M. Karagheusian Inc., carpet manufacturer. Mr. Paules was formerly manager of the company's Albany, Ga., plant. He has been with the firm since 1946, serving successively as personnel manager and administrative assistant at the company's weaving division at Freehold, N. J. In 1950 he was assigned to the engineering and research

division at Freehold, and he became plant manager when the Albany tufting plant was established in 1952.

Clarence B. Moss, Southeastern sales representative of the Synthane Corp., manufacturer of laminated plastics, Oaks, Pa., has moved his headquarters to 7400 Sheffield Drive, West Hills, Knoxville 19, Tenn. His telephone number is Knoxville 8-2659.

## MILL NEWS

GREENVILLE, S. C.—The Comer Machinery Co. of Atlanta has purchased all of the productive machinery of Camperdown Co. Inc., here, which has been closed since last July. The plant, which produced coarse colored goods and gingham, was equipped with some 10,368 spindles and 250 looms. The mill buildings and warehouses are listed for sale or lease through the Alester G. Furman Co., Greenville.

MONTGOMERY, ALA. — West Boylston Mfg. Co. of Alabama, here, has installed an additional 10,000 spindles to its operation. The mill now has a total of some 41,680 spindles. The added spindleage is expected to increase production by some 35 per cent, it is reported, and a number of new employees have been added.

TIFTON, GA.—Tifton Cotton Mills this month marked its 55th anniversary with a four-day community-wide celebration highlighted by an open house at the mills and a closing banquet address by T. M. Forbes of Atlanta, executive vice-president of the Cotton Manufacturers Association of Georgia. A special visitor during the week was South Carolina's 1957 Maid of Cotton, Miss Jo Anne Deason of Enoree, S. C.

GREENSBORO, N. C.—Burlington Industries has announced the purchase of controlling interest in William Klopman & Sons, greige goods manufacturing and sales organization with plants at Asheboro and Ramseur, N. C. Three additional Burlington plants will be added or sold to the Klopman distributing organization in addition to Burlington's High Point and Central Falls, N. C., units which were leased to Klopman on short-term basis in 1954. Klopman will continue to operate as a completely independent unit of Burlington Industries under the direction of William Klopman Sr. Burlington at the same time announced sale of its women's outer apparel operations to a newly-formed corporation known as Triplex. Included in this transaction are Burlington's Dress and Blouse Division, National Mallinson Fabrics and the Apparel Fabrics Division of Hess, Goldsmith & Co. Inc. The sale of these converting operations in no way affects other finished goods operations within member organizations of Burlington Industries, it was stated.



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OVERSEER OR SECOND HAND in Spinning Department available. High School education; I. C. S. graduate; 42 years of age. 25 years' experience in spinning, about 8 years as supervisor. Sober and hard worker. Can furnish references. Write to "Spinner," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as Second Hand in Spinning Department. 15 years' experience Supervisory Second Hand, Head Overhauler and Section Man. A-1 references. Now employed but would like a change. Can start at once. Reply to Box "M. S. T.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

OVERSEER OF WEAVING AVAILABLE—Experienced on C & K's and Draper looms, making fancy dress ginghams, upholstery, lenos, also spuns and various types of synthetics. Can furnish best of references. Reply to Box "C. A. H.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED—North Carolina man desires change. Presently employed as second hand. Will consider fixing or card grinding job. Sober; good manager of help. Reply to Box "M. G. B.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITIONS OPEN—WE CAN PLACE—Boss knitter large hosiery mill; chemists, laboratory men, boss dyers and second hands of dyeing; designers for cotton, rayon, woolen and worsted fabrics; assistant designers and stylists; salesmen and sales trainees; boss weaver Draper box looms. SEND US YOUR RESUME. Many attractive positions at excellent salaries are open for top-notch men. No fee to be paid unless you accept employment through us. Negotiations are confidential.

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